United States Court of Appeals for the District of Columbia Circuit

TRANSCRIPT OF RECORD

BRIEF FOR APPELLANT AND JOINT APPENDIX

IN THE

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT.

of Appeals
For the
Columbia Circuit
F... OCT 10 1951
Joseph W. Stewart
CLERK

No. 11,129

AKTIEBOLAGET AKERLUND & RAUSING, *Appellant*

v.

JOHN A. MARZALL, Commissioner of Patents, *Appellee*.

578

Appeal from the United States District Court for the District of Columbia.

United States Court of Appeals
For the
District of Columbia Circuit
FILED OCT 10 1951
Joseph W. Stewart
CLERK

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PRESS OF BYRON S. ADAMS, WASHINGTON, D. C.

STATEMENT OF QUESTION PRESENTED.

The question is whether the appellant is entitled to a patent for an invention on a package for milk which is new and useful; which constitutes an important contribution to the milk packaging industry; which satisfies a long felt need in the art; which is characterized by simplicity of structure resulting in speed of construction; which has revolutionized the packaging industry; which results in manufacturing economies; which for a given volume greatly reduces the paper stock required; which exhibits rigidity and stability far beyond anything heretofore available; which provides for ease of packing for shipping and storage; ease of and efficiency of use and restorage after partial use of contents; and which turns failure of the prior art into success.

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Appeal from the United States District Court for the District of Columbia.

BRIEF FOR APPELLANT.

JURISDICTIONAL STATEMENT.

The jurisdiction of the District Court of the United States for the District of Columbia was invoked under Section 63 of Title 35 of the United States Code. (Revised Stat. 4915). The jurisdiction of this Court is invoked under Section 1291 of Title 28, United States Code, and Title 17, Paragraph 101 of the District of Columbia Code to review the action of the District Court in this proceeding. No appeal was filed in the United States Court of Customs and Patent Appeals [J. A. 2-3-4].

The appellee answered admitting the jurisdiction of the Court to entertain the action. [J. A. 4] The action was brought to obtain a patent on an invention for a package for milk. [J. A. 2-3-4] The Court below heard evidence and dismissed the civil action at the cost of the appellant. [J. A. 7] Appellant duly served and filed his notice of appeal. [J. A. 7]

STATEMENT OF THE CASE.

This is an appeal from a judgment refusing a patent on a paper package which is a revolutionary departure from prior packages.

The Court below affirmed the decision of the Patent Office that the package was unpatentable over British Patent 442,176 in an oral opinion stating merely "The Court agrees fully with the Patent Office and specifically finds that invention has not been shown". [33] In so holding, the Court below disregarded, we repectfully submit, the evidence of record in basing its decision on the conclusion that appellant was "relying very largely on some machine that nobody ever saw and has never been constructed to indicate what your invention will do". That this was in error is shown by the fact that (1) appellant's original application as filed disclosed* a machine for producing the claimed article; (2) the Court below had just witnessed a showing of a motion picture which fully demonstrated the operation of such a machine; and (3) the invention involved in the present case is directed not to a machine but to a package. The decision of the Court below based on this erroneous understanding obviously showed a complete misconstruction and misconception of the tremendous contribution to the packaging industry by the invention of the appellant.

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* The disclosure of the machine was canceled from the specification on the requirement of the Patent Office as unnecessary to the invention being claimed therein. /51/

The Court below thus erred in finding that invention had not been shown. The Patent Office in its decision admitted that the present package was new [J. A. 52-55] but sought to negative invention by contending that the differences over the British patent 442,176 amount to nothing more that a matter of degree with no new effect or unobvious results. Yet the evidence and testimony of expert witnesses showed clearly and proved that the present package was an entirely new concept and that new and unobvious results are obtained by the present package not only not found in the British patent but completely contrary to the teaching and approach thereof.

Expert testimony established the requirements for packages or containers for milk constructed of paper. These requirements which have long been sought by the packaging industry but never attained prior to appellant's invention are succinctly set forth as: a simple, sanitary durable, leak proof, low-cost, non-returnable conveniently disposable package which may be manufactured by a low-cost, simple, completely automatic high-speed machine. [J. A. 8-9] The package must meet high standards of rigidity, durability and stability in storage, in shipment and in use. The packages must be easily stacked in transporting containers, requiring a minimum of volume. The ultimate package must be handy for the trade, the retailer and the consumer. [J. A. 25-26-27]

The British patented package was a complete failure. The packages disclosed in British patent 442,176 failed to meet these requirements. The testimony presented shows that after an extensive period of time spent in development, together with expenditure of a substantial sum of money, the only result was *an abandoned experiment*. The "abandoned British container" resulted from its inability to meet the needs of the industry. The evidence in this connection came from a witness closely associated with the

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The Court below affirmed the decision of the Patent Office that the package was unpatentable over British Patent 442,176 in an oral opinion stating merely "The Court agrees fully with the Patent Office and specifically finds that invention has not been shown". [33] In so holding, the Court below disregarded, we repectfully submit, the evidence of record in basing its decision on the conclusion that appellant was "relying very largely on some machine that nobody ever saw and has never been constructed to indicate what your invention will do". That this was in error is shown by the fact that (1) appellant's original application as filed disclosed* a machine for producing the claimed article; (2) the Court below had just witnessed a showing of a motion picture which fully demonstrated the operation of such a machine; and (3) the invention involved in the present case is directed not to a machine but to a package. The decision of the Court below based on this erroneous understanding obviously showed a complete misconstruction and misconception of the tremendous contribution to the packaging industry by the invention of the appellant.

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Expert testimony established the requirements for packages or containers for milk constructed of paper. These requirements which have long been sought by the packaging industry but never attained prior to appellant's invention are succinctly set forth as: a simple, sanitary durable, leak proof, low-cost, non-returnable conveniently disposable package which may be manufactured by a low-cost, simple, completely automatic high-speed machine. [J. A. 8-9] The package must meet high standards of rigidity, durability and stability in storage, in shipment and in use. The packages must be easily stacked in transporting containers, requiring a minimum of volume. The ultimate package must be handy for the trade, the retailer and the consumer. [J. A. 25-26-27]

The British patented package was a complete failure. The packages disclosed in British patent 442,176 failed to meet these requirements. The testimony presented shows that after an extensive period of time spent in development, together with expenditure of a substantial sum of money, the only result was *an abandoned experiment*. The "abandoned British container" resulted from its inability to meet the needs of the industry. The evidence in this connection came from a witness closely associated with the

British development. His evidence is uncontradicted. The patent attorney for the patentee of British patent 442,176 testified that experimental work to perfect the British construction was conducted over a considerable period of time but the container of the British patent was dropped as wholly and totally unsatisfactory. [J. A. 18] This witness testified that the experiment was abandoned "because we couldn't produce a carton that would stand up to its job". [J. A. 19] The British carton due to its construction and shape could not be made leakproof. It would not stand up under transportation. [J. A. 18-19] Breaking down of the British container resulting from the construction and shape was caused by jolting or the hydraulic hammer action ramming the fluid into a corner of the package coupled with its flexibility so that if a number of the containers were packed close together deforming pressure resulted. [J. A. 18-19] In any event, the experiment failed and as stated by the attorney for the British patentee "I do know that it failed. We spent 26,000 pounds in five years and we didn't produce a carton." A hundred thousand dollar failure!

The failure of the abandoned British container was due to several factors. The elongated shape of the British container provided extremely flexible sides at such an angle to the ends of the carton as to result in an accentuated hydraulic action against the corner. [J. A. 18-19] The present package has no elongated sides commensurate with the abandoned British container and the angles of the regular tetrahedron eliminate hydraulic action (Plaintiff's Exhibit No. 5). The construction of the present package as a regular tetrahedron also provides essential rigidity as well as sturdiness of construction and stability, clearly shown in the motion picture. (Plaintiff's Exhibit No. 19)

The present package can be stacked easily and conveniently not only for transport, but also in relation to additional packages or other articles as shown in the motion picture and as testified to by the witness. [J. A. 12] The abandoned British containers as shown in the motion picture can not be satisfactorily stacked for transport, nor in association with one another.

The approximately equilateral triangular sides of the present package provide stability whereas the British container having narrow elongated sides fails to provide such stability. (Plaintiff's Exhibits 5, 18 and 19)

The present package after having had a single corner cut therefrom is susceptible of easy pouring and can be readily stored again after partial use of the contents. (Plaintiff's Exhibit No. 19) The abandoned British container was not easily storable after partial usage of the contents due to its shape and construction resulting in instability and as an established fact, in order to get the milk out, the entire top was cut off as testified to by the patent attorney of the British patentee. [J. A. 17] The abandoned British container, due to its construction and shape providing long flexible walls, was not susceptible of easy use of the contents thereof.

The present package can be made from roll paper stock in an entirely automatic manner. The abandoned British container was of necessity shipped in preassembled form and could not be shipped to the packager as roll paper stock. [J. A. 13]

The milk industry in this country is tremendous in size and the individual packages of milk daily produced, shipped and consumed rise to prodigious figures. Under such circumstances, the cost of manufacturing from the standpoint of cost of materials used, as also labor and time consumed are of the utmost importance. The increased cost of manufacture is of course passed on to the ultimate consumer resulting in unnecessary higher cost of milk and working an unnecessary hardship. The present package utilizes 26% less paper to hold the same volume of milk as does the abandoned British container (Plaintiff's Exhibit No. 19); the present package can be manufactured, filled and stacked in transport containers by a single, completely automatic continuously operating machine of low cost (Plaintiff's Exhibit 19) with a consequent substantial reduction in labor costs and time consumed. None of these could be accomplished by the British container and are the reasons for its failure. (Plaintiff's Exhibit No. 19) [J. A. 13-14]

The British patentee approached the problem of obtaining a satisfactory container on an entirely different concept from that of the present applicant as appeared in the testimony of the attorney for the British patentee. [J. A. 19-20]

> Q. Mr. Thornton, in your association with Mr. Palmer and Utility Cartons, Ltd., did they ever attempt in your personal knowledge to shorten the length of this carton somewhat along the lines as indicated in the Wallenberg container? A. They did not, and they were going in the reverse direction. Palmer thought, and I thought, and I think everybody thought, the trouble was this closed end, and I think if anybody had suggested we do anything which would lengthen that we would have thought they were crazy.
>
> Q. Theoretically, Mr. Thornton, what would the ideal carton be from the standpoint of experimental work which was done by Palmer and Utility Cartons? A. What you call the ideal carton I don't know. Any carton which stood up to its job we should have regarded as ideal. It had to hold a pint, that was all. If it would stand up, I don't think we should have minded what the shape was or the size was, or anything.
>
> Q. Mr. Thornton, you have stated that you had end leakage problems. If you elongated the carton in order to contain the same amount of liquid which you wanted to hold—a pint of liquid—what would be the result of the construction which you would obtain then? A. We would have had a long joint, a long closure, and we would have thought that was bad. I thought that was bad. I confess when I saw the seam on this Wallenberg carton I do think why on earth didn't we think of trying it, but we didn't try it.
>
> Q. In other words, in your opinion, then, the seam of the British Carton to Palmer, and the seam of the package of Wallenberg, are approaching entirely different concepts? A. Oh, yes, they are quite different.

The package of the present invention consequently was entirely unobvious to those in the industry skilled in the art to which the invention pertained. If it had been obvious and mere mechanical skill was required the abandoned British container would have been made so as to result in success and not the complete failure that it was.

Considerable experimentation was conducted by the appellant to obtain an entirely satisfactory package which would meet all of the requirements. Up until the present package was invented none of them met all of the requirements. [J. A. 25] The present package does fulfill all of the requirements not only of the packaging industry, but also the retailer and ultimate consumer. [J. A. 14-27] The present package consequently, and contrary to the abandoned British carton, meets all of the requirements for a package for milk and turns failure of the abandoned British container into the success of the present package.

POINTS RAISED ON THIS APPEAL.

Appellant states the following points of error in the decision and judgment below:

(1) The Court erred in dismissing the complaint.

(2) The Court erred in entering judgment dismissing the complaint.

(3) The Court erred in finding that invention had not been shown in the plaintiff-appellant's patent application.

(4) The Court erred in stating that Plaintiff-Appellant "are relying very largely on some machine that nobody ever saw, and has never been constructed, to indicate what your invention will do" and basing its decision thereon.

(5) The Court erred in holding that invention was not required to devise the container defined by claim 14 in suit in view of the teachings of the cited reference.

(6) The Court erred in holding that claim 14 in suit is unpatentable over the cited reference.

STATUTE.

R. S. 4915 (35 U. S. C. A. 63) reads as follows:

> "Whenever a patent on application is refused by the Commissioner of Patents, the applicant, unless appeal has been taken from the decision of the Board of Appeals to the United States Court of Customs and Patent Appeals, and such appeal is pending or has been decided, in which case no action may be brought under this section, may have remedy by bill in equity, if filed within six months after such refusal; and the court having cognizance thereof, on notice to adverse parties and other due proceedings had, may adjudge that such applicant is entitled, according to law, to receive a patent for his invention, as specified in his claims, or for any part thereof as the facts in the case may appear. And such adjudication, if it be in favor of the right of the applicant, shall authorize the Commissioner to issue such patent on the applicant filing in the Patent Office a copy of the adjudication and otherwise complying with the requirements of law. In all cases where there is no opposing party a copy of the bill shall be served on the Commissioner; and all of the expenses of the proceedings shall be paid by the applicant, whether the final decision is in his favor or not. In all suits brought hereunder where there are adverse parties the record in the Patent Office shall be admitted in whole or in part, on motion of either party, subject to such terms and conditions as to costs, expenses, and the further cross-examination of the witnesses as the court may impose, without prejudice, however to the right of the parties to take further testimony. The testimony, and exhibits, or parts thereof of the record in the Patent Office when admitted shall have the same force and effect as if originally taken and produced in the suit. (As amended March 2, 1927, c. 273 Sec. 11; 44 Stat. 1336—March 2, 1929, c. 488—Sec. 2 (b), 45 Stat. 1476.)"

SUMMARY OF ARGUMENT.

Appellant's invention of a new and useful package for milk presents a radical departure from prior constructions and results in a substantial contribution to the milk packaging industry. The package of the present invention is characterized by simplicity of structure resulting in speed of construction. The package meets a long felt need in the art for a package which fulfills the requirements of the packaging industry, the retailer and the ultimate consumer. The package provides a substantial economy in the saving of material and manufacturing costs. The package has rigidity, sturdiness and stability. The package can be easily packed and stored. The package has efficiency of use.

A patent on this package has been refused as being unpatentable over British patent 442,176. The abandoned British container of that patent completely failed to meet the requirements of the packaging industry. The attributes of the present package are totally lacking in the British construction and due to its complete failure to meet the requirements and needs of the industry, the retailer and the consumer resulted in an abandoned experiment. The British container resulted in failure even though substantial experimental work was conducted in attempting to perfect that container and a considerable sum of money was expended in the experiments.

The present package does constitute invention over British patent 442,176 since more than mere mechanical skill was involved in arriving at the present package and the changes required to turn the failure of the abandoned British container into the success of the present package were not obvious to those in the packaging industry, even though they had long searched for a completely satisfactory container.

The present package turns failure into success due to its new and entirely different construction completely overcoming the defects of the British container.

The requirements for patentability have been fully and completely met in the present package and refusal of the Patent Office and the Court below to grant a patent on the package is an error. The evidence submitted in the Court below clearly and unequivocally proved that the present package was an entirely new approach and that new and unobvious results were obtained due to the present construction and which was not taught in the prior art. The Court below disregarded the evidence of record in an erroneous misunderstanding of the facts.

ARGUMENT.

Section 4886, Revised Statutes, 35 U. S. C. A. Section 31 provides that a patent shall issue for a "new and useful" invention. As evidence of invention, a result never before attained is of the utmost importance. The present package fulfills the requirements for patentability, as set forth in the single claim in the application on appeal. The package of the invention is designed for holding milk and which is non-returnable. The package has a shape of a tetrahedron of which all six edges are approximately equal in length. The package is formed from thin and flexible sheet material of rectangular form having its two shorter edges secured together and its two ends flattened and sealed in two relatively perpendicular planes. This tetrahedron has simplicity of structure making it adaptable for construction in fully automatic, high speed machinery. The package is rigid, sturdy and stable. The package in the shape of a regular tetrahedron can be easily and readily packed or stored. For a given volume of liquid contained, the regular tetrahedron provides a substantial economy of paper used.

A patent on the package has been refused by the Patent Office and the Court below as being unpatentable over British patent 442,176. The container of the British patent is in the shape of a narrow, elongated tetrahedron having unequal side dimensions. The British container due to its shape and construction has extremely flexible sides and is subject to end breakage and leakage of the contents. The flexibility prevents sturdiness and rigidity of the container. The shape of the British container renders it impossible to easily or effectively stack the containers for storage or transportation. The shape and construction of the British container makes its difficult to remove the contents in an effective manner and prevents proper storage after use of a portion of the contents. The British container cannot be manufactured in a high speed fully automatic machine and requires a plurality of individual steps in the formation thereof and must be sent to the packager in preassembled form.

The present package is admittedly new. A patent on the package has, however, been refused on the grounds that the differences which exist in shape and structure amount to no more than mechanical skill and that the changes and differences are obvious. Such a holding is entirely contrary to the evidence submitted in the Court below. The Court below based its decision on an erroneous understanding that a machine for manufacturing the package was not in existence and had never been seen. A machine is known and used to produce the package.

The packaging industry has rigid requirements which have been built up over a period of years as to a container for milk which would be entirely satisfactory to fulfill the needs of the packaging industry, the retailer and the ultimate consumer. These requirements have been clearly set forth in the testimony and evidence in the Court below. The present package meets all of these requirements as testimony and evidence has clearly indicated.

The British container fails completely and wholly to satisfy the requirements as set forth and due to this failure has resulted in an abandoned experiment. The British patent therefore in effect constitutes an "abandoned British container".

The present container is more efficient, more economical and has outstanding characteristics and results not attained in the British construction.

The Patent Office has admitted the novelty in the present package and the record speaks for itself as to the usefulness of the package due to its shape and construction and the new results attained thereby. The evidence clearly supports the patentability inherent in the new, useful and unobvious results attained. The present package accomplishes a result which cannot be attained by the abandoned British container.

The packaging industry has long sought a completely satisfactory container. The British patentee after seeking the answer failed, whereas the present inventor has turned this failure to success. This constitutes invention. The inventor has provided that step constituting the difference between success and failure. *Lincoln Stores, Inc.* v. *Nashua Mfg Co.*, 157 (F.2d) 154, C. C. A. 1 (1946), c.d. 329 U. S. 811. The existence of the problem for many years despite futile research by men in the industry skilled in the art testifies to the inventiveness in the present package. *Lincoln Stores, Inc. v. Nashua Mfg. Co., supra.*

The satisfaction of an old and recognized want is highly persuasive of invention (*Carbide & Carbon Chemicals Corp.* v. *Coe,* 69 App. D. C. 372, 102 (F. 2d) 236, *Levin* v. *Coe,* 55 U. S. P. Q. 224.)

The fact that those skilled in the art after substantial experimental work and time spent in research could not perfect the abandoned British container clearly indicates the lack of obviousness in effecting the changes which have turned failure into the success of the present package. If mere mechanical skill were involved in making the present package having before them the knowledge of the British construction, such skill would have been called into action by the known and desired want. *Thornton* v. *Coe,* 69 App. D. C. 338, 102 (F. 2d) 247. The fact that the invention later, in the light of the teachings of the application appears to be simple and obvious cannot negative the presence of a high degree of invention in the present package. The present package possesses such amount of change from the prior art, both in construction and in results attained, as to entitle it to a patent. Many things seem obvious after they have been done and in the light of the accomplished result. Knowledge after the event is always easy and problems once solved present no difficulties. *Diamond Rubber Co.* v. *Consolidated Rubber Tire Co.*, 220 U. S. 428.

The present package in fully meeting the requirements of the packaging industry, turning failure of the abandoned British container into success and in providing new and unobvious results is patentable over British patent 442,-176. The modification of the prior art accomplishes a new and useful result and solves a problem which has long beset the art. *Sharp* v. *Coe* 125 (F. 2d) 185 App. D.C. (1942).

In *Hartford Empire Co.* v. *Coe* 87 (F.2d) 741, 744, the Court stated "We have had occasion in many instances to contemplate the hindsight nunc pro tunc method employed to justify the refusal of valuable inventions in which the patentees are entitled to the protection afforded by the Constitution and the laws."

CONCLUSION.

It is respectfully urged that the package of the present invention and the claim covering this package define a new and useful invention which is not anticipated by the prior art and in view of the long felt need which has been satisfied only now the present invention required more than mere mechanical skill and was not obvious. It is therefore urged that the judgment dismissing the complaint be reversed and a judgment here rendered against the appellee granting the relief prayed for in the complaint upon the record made in the Court below.

Respectfully submitted,

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APPENDIX

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Appeal from the United States District Court for the District of Columbia.

JOINT APPENDIX.

I.

PLEADINGS, DOCKET ENTRIES AND OTHER PAPERS.

68 Filed Aug 26 1949

In the United States District Court
For the District of Columbia

Civil Action No. 3614-'49.

Aktiebolaget Akerlund & Rausing
(Lund, Sweden) *Plaintiff*

v.

Lawrence C. Kingsland, Commissioner of Patents,
Defendant

Complaint to Obtain Grant of Patent.

To the Honorable, the Judges of the United States District Court for the District of Columbia:

1. The jurisdiction of this Court depends upon the patent laws of the United States, this Complaint being filed under Section 4915, Revised Statutes (Comp. Stats. 9460; U.S.C. Title 35, Sec. 63).

2. Karl Erik Sven Wallenberg of Hantverksgatan 8 a, Lund, Sweden, a subject of the King of Sweden, is the original, first and sole inventor of the subject matter described and claimed in his application for U. S. Letters Patent, Serial No. 571,333, entitled "Packages and Methods for Making Same", and filed in the United States Patent Office on January 4, 1945, in accordance with the requirement of the law for such cases made and provided.

3. By Official action dated December 18, 1947, the Primary Examiner finally rejected the claim of the aforesaid application, reading as follows:

> 69 14. A package, especially for liquid substances, comprising a thin and flexible sheet of elongated

rectangular form, said sheet forming a tube by having its two shorter edges adhesively secured to each other, said tube forming approximately a tetrahedron by having its two ends flattened and sealed in two relatively perpendicular planes, and the difference in length between the longer and shorter edges of said rectangular sheet being such that all the six edges of said tetrahedron are approximately equal in length.

4. By decision of March 11, 1949, and following an appeal thereto, the Patent Office Board of Appeals affirmed the Primary Examiner's final rejection of the said claims.

5. No appeal has been taken from the said decision of the Board of Appeals to the United States Court of Customs and Patent Appeals.

6. The plaintiff, a corporation organized under the laws of Sweden, and having its principal office at Lund, Sweden, is, by assignment dated December 5, 1944 and recorded at the United States Patent Office on January 4, 1945 at Liber A-201, pages 347-349, the assignee of the entire right, title and interest of the aforesaid inventor in and to his aforesaid application Serial No. 571,333.

7. By the said assignment, the aforesaid inventor does authorize and request the Commissioner of Patents to issue the Letters Patent on his aforesaid application "to the said Aktiebolaget Akerlund & Rausing, Lund, Sweden".

70 8. The defendant Lawrence K. Kingsland, Commissioner of Patents, by the aforesaid decision of the Board of Appeals of the United States Patent Office has refused and still refuses to grant Letters Patent of the United States to the plaintiff, as assignee of the aforesaid inventor and applicant, on the said application Serial No. 571,333 including the claim set forth in paragraph 3 hereof.

Wherefore, the plaintiff prays that this Honorable Court direct and authorize the Commissioner of Patents to issue to the plaintiff, as assignee of the said applicant, Letters Patent of the United States embodying the claim aforesaid, upon the filing in the United States Patent Office of a certified copy of an adjudication to such effect, and upon compliance with the requirements of the law for such cases made and provided.

E. F. Wenderoth
E. F. Wenderoth,
Attorney for Plaintiff,
Washington Loan & Trust Building,
Washington, D. C.
District 8277

Washington, D. C.
August 26, 1949

* * * * * * * * * *

71 Filed Sep 10 1949

Answer to Complaint.

To the Honorable the Judges of the United States District Court for the District of Columbia.

1. Defendant admits the allegations of paragraph 1 of the complaint.

2. He denies the allegations of paragraph 2 of the complaint.

3, 4, 5, 6, 7, 8. He admits the allegations of paragraphs 3 to 8, inclusive, of the complaint.

Further Answering, the defendant states that the claim set forth in the complaint is unpatentable to the 72 plaintiff for the reasons given in the statement by the Primary Examiner in answer to the appeal and in the decision of the Board of Appeals and in view of the following reference:

British patent 442,176 February 4, 1936

Profert of copies of said statement, decision and reference is hereby made.

E. L. Reynolds
Attorney for Defendant.

* * * * * * * * * *

73 Filed Dec 7 1949

Order.

Upon consideration of the fact that John A. Marzall succeeded to the office of Commissioner of Patents on December 2, 1949, in place of Lawrence C. Kingsland, who resigned, and it appearing that there is substantial need for continuing and maintaining the above-entitled action, now therefore it is this 7th day of December 1949

Ordered that John A. Marzall, Commissioner of Patents be and he is hereby substituted as party defendant in place of Lawrence C. Kingsland, formerly Commissioner of Patents.

H. I. Schweinhaut
Judge.

We Consent:
E. F. Wenderoth
Counsel for Plaintiff
E. L. Reynolds
Counsel for Defendant
and for John A. Marzall, Commissioner of Patents
N/

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74 Filed Apr 23 1951

Findings of Fact.

1. This is an action brought under the provisions of Section 4915 R. S. (35 U.S.C. 63) in which it was sought to have the Court find that plaintiff, as the assignee of the application for patent, Serial No. 571,333, filed by Karl Erik Sven Wallenberg in the United States Patent Office on January 4, 1945, is entitled to have a patent issued to it containing claim 14 of that application.

2. The application describes, and the single claim in suit defines, a container for such a liquid as milk. That container is produced from a blank of elongated rectangular form. In producing the container, the shorter edges of

the blank are adhesively secured to each other to form a tube, and the two ends of the tube are flattened and sealed in two relatively perpendicular planes to form an approximation to a tetrahedron. The difference in dimension between the longer and shorter edges of the blank is such that all six edges of the tetrahedron are approximately equal in length.

75 3. British patent No. 442,176 discloses a container to carry milk and other liquids. This container is formed from an oblong blank. The drawing of the patent indicates that the longer edges of the blank are secured together to form a tube, and the specification sets forth that the two ends of the tube are flattened and secured in two relatively perpendicular planes, whereby the container assumes the general form of a tetrahedron, with the two ends of the container shorter than the four other, equal edges. The ends of the tube may be either rolled or folded, and may be secured either by adhesive or by metal clips. Optionally also, the walls of the container may be scored along lines joining the extremities of each end to the extremities of the other end, so that the container will take more exactly the form of a tetrahedron.

4. In view of the teachings of British patent No. 442,176, invention was not required to devise the container defined by claim 14 in suit.

5. Claim 14 in suit is unpatentable over British patent No. 442,176.

Conclusions of Law.

1. Plaintiff is not entitled to a patent containing claim 14 of application Serial No. 571,333 in suit.

2. The complaint should be dismissed as to the single claim in suit.

F. Dickinson Letts
Judge

April 23, 1951

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76 Filed Apr 23 1951

Judgment.

This action came on to be heard at this term, and thereupon upon consideration thereof, it is this 23rd day of April, 1951

Adjudged that the complaint be and it is hereby dismissed, with costs against plaintiff.

F. Dickinson Letts
Judge

* * * * * * * * * *

77 Filed Jun 22 1951

Notice of Appeal.

Notice is hereby given this 22nd day of June, 1951, that Aktiebolaget Akerlund & Rausing hereby appeals to the United States Court of Appeals for the District of Columbia from the judgment of this Court entered on the 23rd day of April, 1951 in favor of John A. Marzall, Commissioner of Patents, againsts said Aktiebolaget Akerlund & Rausing.

E. F. Wenderoth,
Attorney for plaintiff
Washington Loan & Trust Bldg.,
Washington 4, D. C. Di 8277

E. B. Batchelder
Of Counsel.

Washington, D. C.,
June 22, 1951.

* * * * * * * * * *

II.

EXCERPTS FROM TESTIMONY AND PROCEEDINGS.

21 **Charles A. Southwick, Jr.** was called as a witness on behalf of the plaintiffs, and having been first duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Batchelder:

Q. Mr. Southwick, would you please state your name, age and residence? A. My name is Charles A. Southwick, Jr. My age is 45 years. I am a resident of Hope, New Jersey.

Q. Mr. Southwick, at the present time what is your occu-
pation? A. I am a consulting engineer to the pack-
22 ing industry. I am also technical editor of Modern
Packaging, which is the leading monthly magazine in
the packaging field.

Q. Mr. Southwick, how long have you been engaged in your work as consulting engineer in the packaging industry? A. I have been a consulting engineer since 1947, but I have been engaged in the packaging industry since 1928.

Q. Are you familiar with the requirements for containers for packaging milk or liquids of various types? A. I have been in my experience associated with or involved with several different packages involving the packaging of liquids, such as milk, oil or other materials.

Q. Do you know, Mr. Southwick, the requirements or desires relating to a package for milk, that is, a paper carton or package for milk as distinguished from the standard milk bottle? A. It is my understanding of the milk industry's problems that they require, in general, a container and a method of making it which meet the following specifications:

1. A simple, durable, low-cost, nonreturnable package.
2. A low-cost, simple, and high-speed machine for the production of such a package.

3. A package that the consumer will find
23 attractive, convenient to use, disposable, and sanitary.

In other words, the milk industry desires not a packaging alone, but a whole series of integrated steps, including a machine which results in the preferred condition that I have outlined. The package is but one element of such a program.

However, both the industry and the consumer need—however, having both the industry and consumer needs in mind, each step or element of such a program must be designed, developed and engineered to accomplish the result which is not easy to secure.

Q. Mr. Southwick, are you familiar with the Wallenberg container, which is the subject of the present suit? A. I am familiar with that container, and have studied the applications and the various forms of that container.

Q. Could you indicate to the court what underlying factors were considered in the construction of the Wallenberg container from the technological and manufacturing points of view as well as the ultimate consumer? A. The Wallenberg package was developed to give the following advantages: a package material which is strong and a shape which is efficient in the use of this material. It is also amenable to simple forming and closing steps and results in a reasonably priced container.

The material can be stored in roll form, which
24 requires very little space in the dairy. The material satisfactorily preserves and does not affect the milk. It has a simple machine which can form, fill, and close this package with a high rate of production.

The Court: What did you say about the machine?

The Witness: A simple machine.

The Court: Where does it say anything about that?

The Witness: I want to prove that because of the simplicity of construction of this package. It is amenable to a simple straight-line machine production.

The Court: You are an expert on machines?

The Witness: My engineering service covers machines, materials, as well as containers themselves. In other words, I am an engineering consultant to the packaging industry.

As I said before, (2) a simple machine which can form, fill, and close these packages at a high rate of production. This package is convenient to store in shipping cases, easy to use in the home, and provides the other advantages that I indicated at first.

The Court: What are the advantages in the home?

The Witness: Because of its construction it has inherent stability. Because of its construction it is easy to fit into the refrigerator of the home. It is easy to pour from because of its construction and design.

The Court: Why do you say that that shape is desirable in the refrigerator?

The Witness: There are of course other shapes that are convenient also.

The Court: Why do you say this is preferable for use in the refrigerator in the home?

The Witness: Shape is only one of its many advantages. It is very stable.

The Court: You just told me that because of its shape it is desirable for placing in the refrigerator in the home. Now, why does that shape have any desirability for that purpose?

The Witness: It is very compact, it is very stable; and it nests, as we will show by later evidence, very well. If you had a group of these—

The Court: But you have only one, as many homes would have.

The Witness: It still fits in very well. It is possible to fit it into the refrigerator, and it is stable and strong, as you can see.

The Court: Don't you lose much space on this side in your refrigerator?

The Witness: Refrigerators have different heights of shelves. This fits in the narrow shelves very well.

The Court: I understand that. But I am talking about the space here, on the sides.

26 The Witness: The only thing that I can say is that evidence has indicated—

The Court: In other words, if it were square wouldn't it fit into the refrigerator better?

The Witness: This fits also very well.

The Court: Wouldn't a square one be better?

The Witness: Oh, yes, a square one would fit equally well, too.

The Court: Wouldn't it be better? Wouldn't it conserve space?

The Witness: I think that is a matter of opinion of the consumer.

The Court: I am asking you your opinion. You are the expert.

The Witness: The square package of course would fit very well. This also fits very well.

The Court: Wouldn't it fit better? Wouldn't it conserve space, a square package?

The Witness: I think it would depend on how you used it.

The Court: You don't give me an answer. I want your opinion.

The Witness: A square package is the conventional American package in most cases, and it is quite saisfactory.

The Court: I know that. Which is desirable for
27 the use of space in the refrigerator, a square one or
one like this?

The Witness: I presume, as far as exact dimensions go, that the square one would use less space.

The Court: Then do you really claim that because of this shape that it is most desirable to the housewife?

The Witness: Not only from space saving, your Honor, but—

The Court: I am speaking of that, because that is the reason that you gave for it.

The Witness: Space and stable.

The Court: I know, but you told me space.

The Witness: I think you will see later on, as we show in the film, that it does nest very well.

The Court: With others?

The Witness: With other packages. With other items, also.

The Court: Go ahead.

By Mr. Batchelder:

Q. Mr. Southwick, when you were referring to the space, you were referring primarily to what? A single carton? A plurality of cartons? Or its assembly with other articles which might be placed in the refrigerator? A. I was speaking of space also as volume, as well as any given dimensions. It has a very nice volume, of course, and it
28 does nest well with other items in the refrigerator.

Q. Are you familiar with the British package as shown in the Palmer British Patent 442176? A. Yes, I am.

Q. Are there any differences basically in construction between the Palmer container and the container of the plaintiff, Wallenberg? A. There are in my opinion basic differences in the construction of these packages. In this case I would like to use Exhibit No. 4. The significant differences from an engineering viewpoint between the British reference and the Wallenberg application lie in the method of making the end closures.

The British reference describes in many places how the ends of the tubes are secured, but the intent is always to use two or more of the following steps, and I quote:

"Collapsing the sides to a straight line"—which is from Claim 1—"securing together by coating them with adhesive"—which is from Claim 7—"folding them upon themselves"—which is from Claim 7—"or by clamping them together with a clip"—from Claim 5.

However, the preferred construction of the British package uses a bottom closure which is made in three steps.

This, your Honor, is similar to one of the exhibits
29 which have been presented.

The preferred construction of the British package uses a bottom closure made by three steps: collapsing the sides, applying an adhesive, and folding down and holding in that position until the adhesive has been secured.

The preferred method of making the top closure of the British reference is by bringing the tops together, folding down the extended flap, and applying a metal clip which is similar to the finished packages which have been offered in evidence. Each of those steps are used in that formation in the preferred form of the British package.

Q. Mr. Southwick, in the present construction— A. May I continue?

Q. Yes. A. I would like to continue to point out the construction differences.

To accomplish these steps the British reference requires, beyond the Wallenberg application, several things, or a combination of them, but always something extra. An extended flap, or an adhesive, or a clip, or a turning down, all of which are beyond the methods used for securing the ends as disclosed in the Wallenberg application.

The Wallenberg closures, both ends, are made by bringing together and sealing in a simultaneous and continuous operation to secure that result, which uses no adhesive, no folding down, no clips, and no extended flap surface.

Q. Mr. Southwick, from the technical and engineering aspects, what would you say the differences which you have recited to the court result in as regards the advantages or differences in the Wallenberg package? A. The results of this simple closure allow the Wallenberg package to be made at high-speed continuously, with no extra materials, while the British package requires the following steps: the bottom is made and closed, it is shipped to the milk packager in a flattened condition, it is erected, it is filled, the top is brought into position, the flap is turned down, and the clip is supplied, as I have outlined before.

In fact, all of them beyond the simple step of bringing the edges together are extra steps as indicated by the Wallenberg application, where sealing is accomplished by bringing the faces together and sealing simultaneously—one operation—as contrasted to the multiplicity of steps and materials used and taught in every single step of the British reference.

Q. Mr. Southwick, in your opinion, would you say that if the British package were modified by a shortening or changing of the dimensions, would that result in the advantages and construction of the Wallenberg container? A. A simple
reduction in the dimensions in length of the British
31 package, or even a change in width, would not re-
sult in the Wallenberg package because of the differences that I have pointed out and the method of making the closures.

Q. Would you please repeat for the court the outstanding characteristics of the present Wallenberg container, which results from the simplicity of construction which you have, and the container in itself? A. The simplicity of the Wallenberg package and its methods of making seals allows it to be made on continuous automatic equipment. It also results in an extremely durable package in the way in which the closures are made.

I think you will readily see that by making a closure which consists simply of squeezing and sealing, we are able to develop considerable pressure along a straight line, which makes this seal extremely durable, as contrasted with the multiplicity of steps necessary to make the British reference.

Mr. Batchelder: That will be all.

The Court: Mr. Moore, you may inquire.

Mr. Moore: No cross-examination, your Honor.

The Court: Thank you, very much. You may step down. (Witness excused.)

Mr. Batchelder: Our second witness, your Honor, will be Mr. Thornton.

32 Whereupon **Alfred Augustus Thornton** was called
as a witness on behalf of the plaintiffs, and having been first duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Batchelder:

Q. Mr. Thornton, would you kindly state your name, age, and residence to the Court? A. Alfred Augustus Thornton, age 72, 24 to 27 High Hope, London.

Q. Mr. Thornton, what is your occupation? A. I am a chartered patent agent in London.

The Court: I didn't understand that.

The Witness: I am a patent attorney in London.

By Mr. Batchelder:

Q. Are you familiar with British Patent 442176, in the name of Utility Cartons, Ltd., and William Samuel Palmer, which has been introduced in evidence? A. I am very familiar with it, yes.

Q. Would you please tell the Court how you are familiar with this patent? A. An associate attorney in Sweden, who happens to know me, saw my name on the specification and he wrote to me and asked whether I could tell him what had
happened to the particular carton, whether it was
33 put on the market and what had happened to it.

I wrote back and said as it happens I can tell you all about it.

Q. Mr. Thornton, may I interrupt you, please? What is this that I hand you? Would you please tell the Court what that is? A. Yes. That is the printed specification of British Patent No. 442176.

Q. Mr. Thornton, who were the agents or attorneys who prosecuted this patent application in Great Britain? A. I was. In those days I had no partners.

Q. Are you familiar with the inventor patentee, Mr. Palmer? A. I knew him pretty well, indeed. As a matter of fact, we did a lot of experimental work together on dried milk. I spent a fortnight with him living in the same cottage in the country, doing some powdered milk experiments about 1928, when I first knew him.

Q. Are you familiar with the work which led up to the grant of this British patent? A. Yes.

Q. As regards the containers? A. Yes. Palmer started on a different line altogether. He started on a triangular container. A number of those were made and tested. 34 The trouble with those was that they all broke down at the corners. Although he took steps to remedy that by putting gussets in the corners, they still failed.

This particular tetrahedron was the last of the various containers that he tried.

Q. Mr. Thornton, after they had the triangular container, which you say was unsatisfactory, did they then modify the shape of the container and if so would you please inform the Court what their next step was? A. I think as a matter of fact from my memory there were quite a number of steps. I think we actually did try a square container, but the final one was this tetrahedron.

Q. After they arrived at the tetrahedron, what steps did they take in attempting to make it commercially feasible? A. We started on tubes. They started from circular tubes, clamping the ends at right angles to each other. A good many experiments were made with them. They were made from a wax paper. I do remember that. They failed, not only from the joint, but they actually failed along the seams.

That was, I think, due to the fact that the adhesive relied upon the wax. Then we made, from blanks which 35 were not waxed, and the container was built up and ordinary adhesives were used to make sealing edge, the longitudinal sealing edge, and the bottom edge, and then the carton was waxed, dipped in wax, and then, in use, the carton was filled, lapped over, and closed, the wax being heated with an iron and a clip put on finally.

The first experiment had no clip. They broke down badly. Then a metal clip was put on. But even that did not solve the problem.

Q. Mr. Thornton, what was the ultimate form which was used? Was that the tetrahedron as shown in the British patent? A. The final form—your Honor, it is many, many years ago, and I am hesitant to swear as to very precise details. But in general that was the container (indicating). That was the container. The clips were not quite like this; they were a softer metal, and apart from a corrugation down lengthwise, the clamp they had also put some corrugations vertically.

The Court: Which is the top?

The Witness: We will assume, your Honor, that this is the container which is sent out.

The Court: Which is the top?

The Witness: This will be the top (indicating).

The Court: Could you turn that over and call the
36 other the top?

The Witness: You could, except that that is fixed. You can't do anything with that. What I call the top is the part that you fill through.

The Court: How do you get the milk out?

The Witness: Cut the top off.

The Court: And there is no way to close it after you start to use it?

The Witness: Yes. You fit it, and then it is closed by the clip. The idea was to send that out to the customer, and when the customer got it, to cut the top off, and you pour it into a jar.

The Court: How would you get the milk out of this one (indicating)?

The Witness: Cut the corner off. You see, your Honor, I might explain this to you: In the triangular carton that we first started, that is what we did. We just cut the corner off. We had a scoring and cut the corner off.

You could pour a little off, but you didn't pour it all out. But when we got to this one, the only idea we had was to cut the top right off and put it in a jar.

The Court: You couldn't store that after you started to use it?

The Witness: Oh, no. It had to be used.

37 By Mr. Batchelder:

Q. Mr. Thornton, would you tell the Court, please, why—I should say what actually happened to Utility Cartons, Ltd., after a series of experiments which you have outlined here? What was the final outcome? A. Utility Cartons was a company which was formed in 1934 with a capital of 100,000 pounds, but only 26,000 pounds-some-odd—26,000 and something—was called up. That money was used in these experiments. When we came to the end of the experiments it was decided not to call up the additional capital, and the company was wound up. It was wound up in 1940.

Q. Mr. Thornton, would you tell the Court the reason why the company was wound up, why the business of the company was concluded, and the additional capital was not called up? A. The policy of the company was: if we can get a milk container which really will stand up to its job—and its great job was transporting by lorries over our rough country roads—if we could get a satisfactory carton, even main research, even if we spend a pound of time to get it, if we could get a satisfactory one then we will go into the question of mass producing them and producing machinery.

There was an engineer named Harrington associated with
the company. The idea was that if we could get the
38 right thing that Harrington would then set to work
to devise machinery to make the carton commercially. Of course, we never got to that.

Q. What was the reason why you never reached the stage of attempting to make them commercially? A. We could never make them leak-proof. They would leak at the closed end.

Q. With reference to this exhibit, which is Plaintiff's Exhibit 18, would you indicate where the leakage occurred? A. The leakage occurred at both edges.

Q. What was the reason for that leakage? A. Don't ask me. I don't know. We never knew. I don't know. I have a theory that it was the jolting, the hydraulic action bumping against this corner, added to what I thought was that these were flexible. If they were packed close together you got pressure, also, which I think was one of the reasons, but I would't say.

I am not a good enough expert to tell you why the thing failed. I do know that it failed. We spent 26,000 pounds in five years, and we didn't produce a carton.

Q. In your opinion, Mr. Thornton, would you say that this was abandoned due to the failure of the cartons to provide satisfactory containers? A. There is no doubt about it.
The reason was that we abandoned our experiment,
39 because we couldn't produce a carton that would
stand up to its job. There is no sort of doubt about
that.

Q. And the ultimate carton which you tried is the same as that shown in your British patent? A. That is the ultimate one, yes.

Mr. Batchelder: This is the ultimate one, referring to Figure 2, your Honor.

The Witness: Some hundreds of Figure 1 were made from tubes, just tubes, pinched at the ends. Some hundreds were made, but they were even worse than the others.

By Mr. Batchelder:

Q. Mr. Thornton, in your association with Mr. Palmer and Utility Cartons, Ltd., did they ever attempt in your personal knowledge to shorten the length of this carton somewhat along the lines as indicated in the Wallenberg container? A. They did not, and they were going in the reverse direction. Palmer thought, and I thought, and I think everybody thought, the trouble was this closed end, and I think if anybody had suggested we do anything which would lengthen that we would have thought they were crazy.

Q. Theoretically, Mr. Thornton, what would the ideal carton be from the standpoint of experimental work which
was done by Palmer and Utility Cartons? A. What
40 you call the ideal carton I don't know. Any carton
which stood up to its job we should have regarded as

ideal. It had to hold a pint, that was all. If it would stand up, I don't think we should have minded what the shape was or the size was, or anything.

Q. Mr. Thornton, you have stated that you had end leakage problems. If you elongated the carton in order to contain the same amount of liquid which you wanted to hold —a pint of liquid—what would be the result of the construction which you would obtain then? A. We would have had a long joint, a long closure, and we would have thought that was bad. I thought that was bad. I confess when I saw the seam on this Wallenberg carton I do think why on earth didn't we think of trying it, but we didn't try it.

Q. In other words, in your opinion, then, the seam of the British Carton to Palmer, and the seam of the package of Wallenberg, are approaching entirely different concepts? A. Oh, yes, they are quite different.

Q. Mr. Thornton, have you had an opportunity of viewing a film prepared by Mr. Torudd? A. Yes.

Q. Would you please indicate to the Court whether or not the depictions of the containers therein, as regards
41 the British device, are completely accurate in your opinion? A. They are extraordinarily accurate in the general construction of the carton. The only criticism that I have had of the film is that it shows where the carton at the top is poured out. In the film you have shown that a notch is cut in the corner, but as I have explained to his Honor, that wasn't the idea.

The idea was that we were going to cut the top right off, we were not going to cut the corner.

Mr. Batchelder: Thank you, Mr. Thornton.

The Court: Mr. Moore?

Cross Examination

By Mr. Moore:

Q. Is this container, which has been marked Plaintiffs' Exhibit No. 18, the type of container that the Utility Cartons made research on? A. Yes, sir.

Q. You suggest that the top of that carton is the portion at which the milk is poured in? A. Yes.

Q. The bottom is the other end? A. Yes.

Q. Was it that you have difficulty with leakage at
42 the bottom? A. We ultimately got over most of the
trouble about leakage at the bottom, for this reason: if we were using a waxed paper we got trouble at the bottom as well. But when we made the carton up from ordinary manila paper, sealed with this adhesive, an elastic adhesive, closed that end with an elastic glue, we didn't get trouble there.

Then it was waxed, you see; it had to be waxed. I think because of some food regulations; I am not sure. But it had to be waxed. And we were relying on the wax at the top as the adhesive.

When the carton was filled, we folded over the end, put this clip on, and squeezed it in, using a little heat. That is where the trouble was.

Q. You say you relied on wax at the top as an adhesive? A. Yes. We didn't put any further adhesive on because we couldn't.

Q. Should you have used at the top the same adhesive that you had used at the bottom, you would expect a secure seal? A. I wouldn't be able to say. What I do say is that we just couldn't do that. We couldn't destroy the wax. We had to have the wax.

Q. Your problem in getting a secure seal was a
43 problem in adhesives, was it? A. I wouldn't say
that. All I can say is that we had to rely on wax truly enough for the closure end, and it would just lead. Whether if we could have scraped that wax off and put an ordinary adhesive on and then turn it over, I don't know. It might have stood up. I don't know.

Q. Your problem was, generally, with an adhesive? A. The problem was to get a closure at the top. I think that it may well have been that the sealing wax was the vital thing.

Q. If you could have gotten a superior clip it might have solved your problem? A. I don't think so. We had a good clip. We had a clip with a rather softer metal than this, if I remember. As I have told your Honor, this is a long time ago, and I am a little worried about swearing as to details. But I do remember that the clip was a softer—it looked like a softer metal, more like tinplate.

It had a groove in the middle, rather more in the middle than this, and there were one or two grooves vertically in the thing. It was a pretty good clip.

Q. When did you suggest this experimental work took place? A. I couldn't hear you, sir.

Q. What date, what period, did this experimental
44 work cover? A. It covered from about 1935 to about
1939.

Q. So the— A. I am talking now about this tetrahedron. Our old experiments went back from 1932 and went right on to the end of the company.

Q. Was the experimental work on the tetrahedron container in progress at the time you solicited this British patent 442176? A. Very shortly after. Palmer showed me a rough—I wouldn't remember whether it was before or after we filed that provision. He showed me a rough tube with the ends fixed. I couldn't tell you what the date was. But it was shortly after that, shortly after that.

I should think they were very much then on the triangular container, but so far as my memory goes I should say it was 1935, something about 1935.

Q. Would it refresh your recollection if you referred to the dates of the several provisional specifications? A. This rather confirms what I am thinking, that it was about 1935. The last of the provisionals is 1935.

Q. Then work was in progress on this tetrahedral container of Palmer's at the time you solicited the British Patent of 442176; is that true? A. I think very shortly after.

45 Q. What do you mean by very shortly after? A. I
couldn't give you a date. I couldn't give you a date;

I haven't the least idea. I am guessing that it was about 1935.

The Court: The specification, when accepted, was February 4, 1936.

The Witness: We should file a patent just as soon as we could get to start to work, we should file a provisional, then we should start our experimental work. That is why I think it would be around 1935, 1936 perhaps.

By Mr. Moore:

Q. This complete specification was let April 5, 1935; is that true? A. Yes.

Q. How much work had been done on this tetrahedral container prior to April 9, 1935? A. I wouldn't like to say.

Q. There had been some work done? A. There had been some work done in the sense that I had seen some samples.

Q. Some samples had been made? A. Yes, because I remember when preparing complete specifications I had a sample. I don't remember what had been done in what I call the bulk production test.

Q. You do know, don't you, that this complete
46 specification was prepared in light of the experience
that the company had had with the carton; is that
true? A. In the light of experience, in the light of guesses as to what was going to be important or not.

Q. The experience and the guesses were incorporated in the patent specification? A. Yes.

Mr. Moore: That is all.

Redirect Examination

By Mr. Batchelder:

Q. Mr. Thornton, the complete specification was left in the Patent Office April 9, 1935, and you have stated that you guess that the experimental work was taking place in 1935, possibly in 1936. A. Yes.

Q. When was the Utility Cartons, Ltd., finally dissolved? A. 1940.

Q. 1940? A. September 1940.

Q. From 1935 to 1940 were experiments being conducted to provide a container? A. They were.

Q. Were the experiments conducted directed to the tetra-
hedron as shown in British Patent 442176? A. Mainly
47 so, but I couldn't say, sir, that they were solely con-
cerned with that. Palmer was an experimenter, and
I should expect he tried all sorts of things that he didn't
even tell us about.

Q. What was the last container which you recall that the Utility Cartons people, and Palmer, were experimenting with? A. That is the last one, the one that I showed his Honor.

Q. That up to and including roughly 1940? A. Yes.

Q. Did they ever provide a satisfactory carton or container during that period of time? A. They did not.

Q. Utilizing the device as you see there? A. No, they did not.

Mr. Batchelder: Thank you.

The Court: Thank you, very much.

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48 **S. Erick S. Torudd** was called as a witness on behalf of the plaintiff, and having been first duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Batchelder:

Q. Mr. Torudd, would you be kind enough to tell the Court your name, age, and residence? A. My name is S. Erik S. Torudd. I am a citizen of Lund, Sweden. I was born on the 25th of March, 1910.

Q. What is your occupation, Mr. Torudd? A. I am a director of the company, Aktiebolaget, Akerlund & Rausing.

Q. How long have you been associated with the firm? A. Since 1934.

Q. Are you familiar with Mr. Wallenberg, the inventor in the present application? A. Yes, I am. In fact, I have been

in charge of the research department since it started in our company. Mr. Wallenberg is a member of the
49 research department.

Q. You have been engaged in the research development pertaining to this carton, then? A. Yes. From the very beginning. We started as early as 1934 or '35 to introduce packages for milk on the Swedish market, but all of them were turned down for the reason that milk in Sweden is very cheap, and therefore the dairies wanted to have a cheap package.

They told us that the machines were too expensive for the packages, and the process too expensive for our trade.

The Court: The machine was too expensive?

The Witness: Yes, sir, too expensive. They told us if you can cut the cost to about half, we have a chance to introduce a one-way package. Then we started and went on since around 1935, with our work.

Every new member of our research department that I hired I told him that we have to have in mind to find a good package for milk. Wallenberg was one of the members and he, until his invention, had worked on it for three or four years.

By Mr. Batchelder:

Q. During this time that they were experimenting with the cartons, had they set up any requirements that they felt must be met in the end product, that is, the carton which would result from the experimental work?
50 A. Yes. I, myself, indeed made requirements. These requirements were not only for the package itself, they had to be for the whole process. If I got a good package that looked nice and so on, it still must meet the requirements of making it, filling it, shipping it, and using it.

We constructed lots of packages that met a few of the requirements. Some of them met more of the requirements but I had to turn them down for the reason that none of them, up to the Wallenberg package, were meeting all the requirements that I had.

Q. Would you kindly tell the Court what these requirements were which were considered essential in the end carton? A. Yes. The first is that the package, the milk package, must require a minimum of material per unit of volume. Second, the package should be suitable for fast-running, fully automatic machines.

The Court: What machines did you have in mind?

The Witness: I had in mind a machine that could fill in a continuous process.

The Court: Have you seen it?

The Witness: I have seen all the American—

The Court: Have you seen that machine?

The Witness: The one we have now?

The Court: No. The one that you say would do the job.

The Witness: No.

51 The Court: Is it in existence?

The Witness: It did not exist at all.

The Court: Go ahead.

A. Three, there is a foaming problem with milk, which is limiting all the packages now used to a certain speed of around 60 or 70, and I wanted if possible to have a process that was not limited by filling one by one.

Four, I wanted a package to be delivered to the dairies in rolls instead of having them erected or delivered in parts.

By Mr. Batchelder:

Q. You mean rolled stock? A. Yes. I wanted a package or a process that was so simple that the dairy men need not have to be a paper converter. If you have them in parts, usually the men erecting and filling the cartons must have lots of experience really in how to make a carton.

Six, the machine making and filling the package should if possible be an inexpensive machine.

Seven, I wanted a package that was simple to use for transporting containers; if possible it should take a smooth, small space in shipping.

Eight, I wanted a sanitary package.

Nine, the package should be rigid and leak-proof.

Ten, I wanted a package that was handy for the
52 trade, the retailer and the consumer.

Eleven, I wanted if possible a continuous process, saving manpower for making and filling the packages.

Q. Mr. Torudd, the container of Wallenberg: does that fulfil the various requirements which you have set forth? A. Yes. It was the first package fulfilling all the requirements that I had.

Q. Are you familiar with the patent situation as regards the Wallenberg applications? A. Yes. I have been in charge of all our patent applications since 1935.

Q. Have you obtained the patents on the Wallenberg application in any countries? A. Up until I left Sweden on the 13th of March, we had patents on the Wallenberg container in 24 countries, including England and the Netherlands.

Q. In any of these countries where patents have been granted, has British Patent 442176 been cited during the course of the prosecution? A. It was referred to as I remember it in the Netherlands and Sweden.

Q. Can you point out clearly to the Court the differences in construction, shape, and results between the Wallenberg
container and the Palmer container? A. Yes, I have
53 prepared a film so that I could show it in a simpler
way for Your Honor and for the Solicitor, and therefore I hope that we can show the film to the Court. That shows the differences in my opinion between the packages and the differences in the process which it has to be used for.

Q. Did you prepare this film yourself or was it prepared under your direct supervision? A. The scenario I have written myself. It has been done under my direct supervision.

Q. Are the containers and scenes shown in the film accurate in all respects as regards the Palmer container and the Wallenberg container, and the results? A. Yes, they are.

Mr. Batchelder: Your Honor, I would like to introduce as part of Mr. Torudd's direct testimony this film, which he has had prepared under his direct supervision, including preparation of the scenario.

The Court: Very well.

Mr. Batchelder: We will mark that as Plaintiffs' Exhibit 19.

(Plaintiffs' Exhibit No. 19 was marked for identification.)

(The presentation of the motion picture was then made to the Court.)

* * * * * * * * * *

55 **S. Erik S. Torudd**, a witness on behalf of the plaintiffs, resumed the stand, and having been previously sworn, was further examined and testified as follows:

Mr. Moore: I object to the film insofar as it contains such statements as that plaintiffs' container exhibits the flash of creative genius, or that it is entitled to have protection. I submit that such statements as those are argument and conclusions, and should be limited to argument.

Mr. Batchelder: Your Honor, if so desired we will have that part of the film removed. I am sure that we can leave it to your discretion as to which parts of the film are acceptable.

We will be glad to remove those portions of the film relating to that, if it is desired.

Mr. Moore: I wouldn't suggest that. I just suggest that as a matter of consideration of those statements.

The Court: The Court thinks that the objection is good, but believes that the purposes of the case will be served by indicating that it will be regarded as evidence in the light of the objections which have been made. Mr. Moore,
56 you may cross-examine.

Cross Examination

By Mr. Moore:

Q. Did not the application of Wallenberg, Serial No. 571333, as filed in the United States Patent Office, contain a showing of a machine? A. The application was disclosing a continuous method of filling the machine. It was

The Court: That is not his question. Repeat your question.

By Mr. Moore:

Q. Did not the Wallenberg application, Serial No. 571333, as filed, contain a showing of a machine? A. It was not showing a complete machine. It was only showing part of a machine, the Figure 18.

Q. Can we agree that there were figures in the drawings? A. Pardon me?

Q. Can we agree that the figures of the drawing did show a machine? A. Yes.

Q. The fact of the matter is that the machine was shown in Figures 18, 29, 20 and 21? A. Yes.

Q. What was the answer? A. Yes.

57 Q. And that machine, as illustrated, was described in the specification, was it not? A. It was not described in detail, only the principles of it.

Q. But you agree that it was described? A. Yes.

Q. The figures showing the machine and the parts of the specification describing those figures have been cancelled from the application now; isn't that the fact? A. Yes, I know they are out of the application now.

Q. The application now is limited to the container? A. Right.

Q. You have mentioned the granting of some 24 patents in the foreign countries outside the United States. A. Yes.

Q. Do not some of those patents contains showings of the machine? A. Without having them here I can only tell you that the English patent and the Dutch patent don't show the machine.

The Court: They do not?

The Witness: They do not.

By Mr. Moore:

Q. But there are some patents that show the
58 machine? A. I am not 100 percent sure. But I am almost sure that some are shown. In some countries there is not an examination of the patents and therefore I think most of the patents were applied outside of Sweden exactly as the American one. Besides, I know—

The Court: Now answer his question. Let's have the answer to his question.

The Witness: Therefore I say I think in some of them that—

The Court: You think what? Say yes or no.

The Witness: Yes, I think there are some.

By Mr. Moore:

Q. Suppose I show you Figure 1 of the Wallenberg United States application (handing to the witness), and Figure 3 of the British Patent No. 442176. A. Yes.

Q. Wouldn't you say that those blanks are substantially alike in dimensions, relative dimensions? Figure 3? A. Figure 3 there is not at all the same, for Figure 3 is not a blank: it is a folded over tube. That is a folded over tube.

Q. You say that is a tube as folded? A. It is a folded tube. It is not a blank.

59 Q. You suggest, then, that—A. You can see it from here. You can see it in the Figure 3, that there is a side seam, a long side seam in it, and that it is folded over. What is going to be made with this tube now is to close it off and after that to fill it and close it again.

Q. You would suggest then—A. This figure does not show a blank. It shows a tube.

Q. And it is so described in the specifications? A. Yes, as I have been able to read out of the patent.

The Court: What is the answer?

The Witness: Yes, as I have been able to read it out of the patent.

The Court: Does that mean yes or no?

The Witness: Yes.

By Mr. Moore:

Q. The British patentee, in Patent 442176, suggests, does he not, that he may or may not use scoring; is that true?

Mr. Batchelder: Your Honor, if we could have before the witness a copy of the British patent, if the questions are to continue in this direction, it would facilitate it.

The Court: Yes, if you have a copy give it to him. If you will point out about where in the specifications you will find that, it will help him find it.

Mr. Moore: I can do that, your Honor.

By Mr. Moore:

Q. Refer, will you, Mr. Torudd, to the complete specification which is Page 3 of the patent, the second column beginning at Line 91? A. I think that you are right, that he says "may be scored along lines," and he must have it like that, really, for otherwise he had to ship one container by one, erected, and that as you know is not practical and can't be done, really. So he had to have scoring lines.

Q. He said he may use scoring, doesn't he? A. I don't know where you find that he says he shouldn't have it. It is not disclosed that he doesn't have it, it is only disclosed that he has it.

Q. It is disclosed that he may have it. A. That I guess is it.

Q. Is that true? A. It is true that he says "may," that is true.

Q. That leaves the option to the person who follows the teachings of this patent to use scoring or not use scoring? A. No. I should say that you can't read out of the patent more than is disclosed in it. And a person taking a patent like that, he may have the scoring lines. That is taught in the patent.

Q. He may have scoring lines, but he may leave them out? A. Then he doesn't learn that out of the patent. He is not told in the patent to leave the scoring lines out.

The Court: Isn't it taught to leave them out or put them in?

The Witness: In my opinion it is taught in the patent to have the scoring lines for in practice if you took a skillful worker and told him to make the package, he should at once have the scoring lines, otherwise he shouldn't be able to ship the packages, because they have to be erected in a kind of a tube, and how to ship them.

They must be flat to ship. Every converter knows that.

Q. Didn't you suggest in your film that it was preferable according to the teachings of the British patent to use score lines? A. I said in my film it was preferred from the patent to use scoring lines; that I did.

Q. The British patentee may, or may not, use clips; isn't that true? A. That, I think, is right.

Q. In fact, in your film you reproduced this British container without a showing of clips. A. That is right.

62 Q. The only prior art that was cited against this American application was this British Patent 442176; isn't that true? A. That is right.

Q. Did you mean to refer to any other patent in referring to prior art in your film? A. I referred really to prior art in my film when I showed the picture of the packages for milk that you have today in the United States.

Q. You are talking about the square ones? A. The square ones?

Q. But those square packages were not cited against the Wallenberg application? A. Not at all.

Mr. Moore: No further questions.

Mr. Batchelder: No further questions.

The Court: You may step down.

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63 Mr. Batchelder: Furthermore, the only reference in the present application is a British reference, and

as is well known, the British reference must be taken for what it shows only. It is not to be stretched, and we have a very recent decision in this court in Switzer versus Marzall, 89 PQ 20, wherein this doctrine was stated very clearly, which I will briefly give.

It is that a patent relied upon as an anticipation must speak itself. This is with particular reference to a foreign patent.

The Court: That is true of his application too, isn't it?

Mr. Batchelder: Yes, sir.

The Court: You are relying very largely on some
machine that nobody ever saw, and has never been
64 constructed, to indicate what your invention will do.
Why aren't you bound by the law that you cited?

Mr. Batchelder: Your Honor, the only claim that we have is directed to the precise structure of the completed carton. In attempting to show the interrelation between machine method and carton, we have utilized that approach to attempt to make more clear to the court exactly what we were attempting to do.

The claim, which is on appeal, is directed solely to the carton, and not to a machine or not to a method. The application as originally filed did, as brought out by Mr. Moore, contain a machine, even though diagramatic, which could produce a carton, and it also disclosed a method of producing.

But the patent office has required division of these matters which are the subject of the application, your Honor. We are directing our claim and appeal solely to the carton itself. We believe that we have shown the differences in construction, shape, and the new and unobvious results we obtained due to these differences which we have shown.

* * * * * * * * * *

66 The Court: The Court agrees fully with the Patent Office and specifically finds that invention has not been shown.

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III.

EXHIBITS.

Excerpts from Plaintiffs Exhibit No. 1.

85 Mail Division Jan 4 1945 U.S. Patent Office

Petition and Power of Attorney.

Jan 4 45 102207 A Check— 30.00

To The Commissioner of Patents: 571333

Your petitioner Karl Erik Sven Wallenberg, Laboratory Assistant, a subject of the King of Sweden, residing at Lund, Sweden, and whose post office address is Hantverksgatan 8 a, Lund, Sweden, prays that Letters Patent may be granted to him for the improvements in Packages and Methods For Making Same set forth in the annexed Specification.

And he hereby appoints E. F. Wenderoth, W. L & T. Bldg., 900 F St., N. W., Wash. 4, D. C. (Reg. 11284) Attorney, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to sign the drawings, to receive the Letters Patent, and to transact all business in the United States Patent Office connected therewith.

Signed at Malmo, Sweden, this 5th day of December 1944.

Karl Erik Sven Wallenberg

SPECIFICATION.

To All Whom It May Concern:

Be It Known That I, Karl Erik Sven Wallenberg, a subject of the King of Sweden, residing at Hantverksgatan 8 a, Lund, Sweden, have invented certain new and useful improvements in Packages And Methods for Making Same of which the following is a Specification:

86 My invention relates to containers or packages and to a method of manufacturing same, and more

particularly my invention relates to packages or containers with single or double walls made of paper, flexible sheet metal or other deformable sheet material.

One object of the invention is to provide a container in the form of a tetrahedron.

Another object of the invention is to provide a container of sheet material by giving such material the form of a cylinder or tubular section and by flattening and sealing both ends of the cylinder or tubular section along two planes perpendicular to one another and thereby convert the cylinder or tubular section into an approximately regular tetrahedron.

A further object of the invention is to produce approximately tetrahedral containers from a rectangular envelope along one of its edges.

The tetrahedral container according to the invention has preferably two sharp or protruding marginal sealed edges, the other edges thereof being somewhat rounded off.

When making tetrahedral containers according to the invention by flattening and sealing cylinders or tubular sections along relatively perpendicular planes at their opposite ends, these cylinders or tubular sections may be made separately, or cut off from a tube that is formed continuously from a web. By using a suitably modified apparatus of the type disclosed in U. S. patent specification No. 2 257 823 it will be possible to fill and seal the 87 *containers before cutting off the same from the continuously produced tube. I wish to point out, however, that the idea of producing my improved tetrahedral packages continuously from sections that are cut off from a continuously produced tube after filling and sealing of the packages, is the invention of another, for which reason I raise no claim thereon.*

The container according to the invention has proved to be very practical and may be used for a great variety of purposes for a wide range of goods, especially liquid and half-flowable goods, it being possible easily to seal the package water-tight and to open it in such a manner that the contents may be poured out in a single operation or at intervals, whereby the contents may suitably be kept in the container during such intervals until the whole of the contents has been emptied.

For an understanding of my invention, reference is to be had from the accompanying drawings in which:

Fig. 1 is a plan view of a blank in the form of a rectangular sheet of material provided with adhesive edges for making a cylinder.

Fig. 2, in perspective, shows the blank formed into a cylinder.

Fig. 3, in perspective, illustrates the blank after the cylinder shown in Fig. 2 has been flattened at one end.

Fig. 4, in perspective, shows the blank illustrated
88 in Fig. 3 but after the major portion of the open end
thereof has been flattened and sealed along a plane at right angles to the plane of the flattened and sealed end of the blank as shown in Fig. 3; and

Fig. 5, in perspective, shows the finished tetrahedral container or package made from the blank.

Fig. 6 is a plan view of a blank of sheet material for making the container according to a modified embodiment of the invention.

Figs. 7 and 8 are side and sectional views, respectively, of the blank shown in Fig. 6 after having been folded along a bisecting line to form an envelope open at its upper end.

Figs. 9 and 10 are views seen from above, showing how the open upper end of the envelope is deformed and closed or sealed along a plane perpendicular to the opposite or lower edge of the envelope.

Fig. 11, in perspective, shows the tetrahedral package thus obtained.

Fig. 12 is a plan view of a modified shape of a blank for making containers or packages according to the invention.

Fig. 13, in perspective, shows how this blank is formed into an envelope open along one of its edges, and how the *envelope thus formed is opened or deformed, whereafter the edge portions bordering the opening of the envelope are sealed together along a plane perpendicular to the opposite edge of the envelope.*

89 *Fig. 14, in perspective, shows one embodiment of the finished tetrahedral package according to the invention.*

Figs. 15, 16 and 17 are views similar to Figs. 12, 13 and 14 respectively of another embodiment of the package according to the invention.

Fig. 18 is a diagrammatic view of an apparatus (the inventorship of which I disclaim) suitable for manufacturing, filling and sealing packages according to the invention.

Figs. 19 and 20 are like views of somewhat different forms of apparatus (the inventorship of which I also disclaim) suitable for manufacturing, filling and sealing packages according to the invention.

Fig. 21 is a fragmentary side view at right angles to Fig. 20, and

Fig. 22 is a sectional view substantially along the line XXII-XXII in Fig. 20.

Referring to the drawings, the reference numeral 1 designates a sheet of flexible material such as paper, which is provided with three adhesive marginal edges 2, 3 and 4 and which is suitable for forming a cylinder (Fig. 2) by attaching the two lateral edges by means of the adhesive marginal edge 2 that will overlap the non-adhesive marginal portion as indicated at 5 in Fig. 2. The two ends of this cylinder are flattened in planes perpendicular to one another so that the edges thus formed will be substantially straight and perpendicular to one another as indicated by the dash and dot lines 6 and 7 in Fig. 2. 90

Fig. 3 shows the cylinder with one end flattened or compressed in this way and secured in this shape by means of the adhesive provided at the marginal edge 3. Fig. 4 shows the cylinder after the subsequent stage of the forming operation i.e., after the other end has been flattened and sealed by means of the adhesive edge portion 4 except for along a small portion which is left open at 8 for filling purposes. The package may be filled when in the stage shown in Fig. 3 or when in the stage shown in Fig. 4, through the opening 8 adjacent one of the corners of the package, this opening thereafter being sealed by completing the flattening or compressing and sealing or securing operation. The sealing or securing of the flattened ends of the package may be produced not only by gumming or the like but also by folding, crimping, stitching, stapling, welding, soldering or the like, or by any suitable combination of such sealing or securing methods. The tetrahedral package obtained in this manner is shown by way of example in Fig. 5. As may be seen from Fig. 5, the edges 9 and 10 formed by the flattening and sealing of the ends of the cylinder form protruding strips or salient margins, whereas the other edges of the tetrahedral package are somewhat round; these rounded-off edges could, of course, be formed into sharp angles by any suitable means but for most purposes the actual form of the edges is immaterial.

It is obvious that the adhesive marginal portions of
91 the sheet material from which the packages are
made, may be stiffened, or substituted, by adhesive strips or the like which may, if desired, be used instead of the adhesive marginal portions 3 and 4. Such adhesive strips will, however, not be necessary for the majority of purposes. The adhesive marginal edges comprise preferably thermoplastic and/or pressure-sensitive adhesive material or the like effective for providing a good seal under the influence of pressure or heat or both from rollers, reels or other pressing members, between which the ends of the cylinder are passed and pressed and possibly crimped, folded, stitched, stapled, welded or otherwise formed into desired shape during the flattening and sealing process. The flattening or compression and sealing of the ends of the cylinder may of course be carried out in any other suitable manner. The package is opened by

cutting off, or piercing a hole in, any one of the corners of the package.

With reference now to Figs. 6-11, a sheet 11 of deformable or flexible material such as paper or the like is formed into a rectangular envelope by folding the sheet and thereafter gumming or otherwise adhesively uniting its two halves along their opposite edges 12, as will be apparent from Figs. 6-9. The envelope thus formed is open along the upper edge opposite the fold 14. After deforming the mouth of the envelope in the direction of the arrows a *in Fig. 9 the mouth or opening of the envelope is flattened*
in the direction indicated by the arrows b, *i.e. at*
92 *right angles to the direction indicated by the arrows*
a *in Fig. 9, which means that this flattening is*
effected in a plane perpendicular to that edge 14 (fold) opposite the mouth or opening of the envelope. The edge 13 resulting from this flattening operation, along which edge the resulting tetrahedral package or container is sealed by adhesion or in any other suitable manner, and the edge 14 (fold) formed by the folding of the sheet will therefore lie in relatively perpendicular planes in the finished package. Of these planes the one containing the fold 14 will also contain the adhesively united edges 12 which form stiffening strips on the exterior of the package. If desired an edge portion along the fold 14 may be flattened or compressed and adhesively or otherwise secured in this shape.

With reference now to Figs. 12-17, an open envelope is formed from a flapped blank 15 shown in Fig. 12 by folding the blank along a line 16 and by folding over and fastening the flaps 17 along their creases 18. The mouth or opening of the envelope is deformed in the direction shown by the arrows a′ *and thereafter flattened in the direction indicated by the arrows* b′ *(Fig. 13), in the same manner as described for the embodiment according to Figs. 6-11. In order to facilitate the opening process and the flattening of the envelope in the manner described above, the blank 15 may*

be provided with creases 19 in such a manner that they will coincide each with one of the four edges of the finally
93 *formed tetrahedral package, which four edges remain if one disregards the edge 16a formed by the folding of the blank along the line 16 and that edge 20 which is formed by the flattening of the mouth of the envelope and along which the package is finally sealed by adhesive means, welding, stapling, crimping, folding or the like. The modification shown in Figs. 15, 16 and 17 in which the same reference numerals have been used for corresponding parts, differs from that just described only by a deviating form of the blank and its flaps.*

In all forms of the invention the sheet material used for the manufacture of the tetrahedral containers may be of any suitable kind such as lined or unlined paper, waterproof paper, grease-proof paper, metal foils or thin sheets as well as foils or other flexible sheets of rubber or of synthetic materials or plastics such as celluloid, cellophane, etc. When the sheet material consists of, or is coated or impregnated with, a thermoplastic, the sealing of the container may be performed by means of melting or welding with heat possibly in conjunction with a hardening of the thermoplastic.

From the U. S. patent specification No. 2 257 823 it is known to form a tube from a web fed from a roll of paper and passed around a cylindrical former, and to produce packages by sealing and cutting off sections from said tube, the packages being filled at the same time as said sections pass the former. The tetrahedral packages of my
94 *present invention may be produced and filled in a similar manner by using a suitably modified type of the apparatus diagrammatically disclosed in the said U. S. patent specification. Three such modifications, invented by another, are diagrammatically illustrated in Figs. 18, 19 and 20.*

According to the form shown in Fig. 18 a tube is formed from a web 22 fed from a roll 21 of paper or the like by form-

ing the web about a cylindrical former 23 and by fastening together the longitudinal edges of the web e.g. by means of adhesion, heat and/or pressure. When adhesive means are employed the fastening of the two longitudinal edges is effected by providing them beforehand with some sort of adhesive means whereafter they are caused to overlap one another and then subjected to compression by means of a heated tool 24 or the like. After having left the former 23, the formed and completed tube 25 is transversally flattened at vertically spaced places, alternately between the one and the other of two sets of pressing members 26 and 27 working at right angles to one another. The members 26 and 27, which may be driven by any suitable means work alternately, and before every new stroke of any of the two sets the formed and gummed or completed tube 25 is fed down a certain amount. The feeding of the tube 25 may be continuous e.g. if the pressing members in every set are adapted to move not only to and from one another in a direction at right angles to the longitudinal direction of the tube but also to reciprocate vertically so that they will, on every stroke, follow the tube a sustained period of time during which they compress or flatten the tube and thereafter return to their starting position. By means of the two sets of pressing members 26 and 27 the tube is flattened transversely at successive places alternatively along one and the other of two relatively perpendicular planes, so that the section 28 of the tube between any two successive flattenings will form approximately a tetrahedron. At every place where the tube is flattened by any of the members 26 and 27, it is secured in this flattened condition e.g. by the fastening together of the contagious flattend walls of the tube by adhesives or any other suitable means. This fastening may be produced by compression of adhesive portions provided on the interior of the tube at those places where the tube is to be flattened. For facilitating the flattening process the pressing members may

be adapted to be heated. Every tetrahedron 28 forms an individual package which, after it has been pressed by means of one of the sets of members 26, 27 and thereby sealed at its lower end, is filled through a channel 32 extending through the former 23 before the other pressing members flatten and seal the top end of the package. After the package 28 has been sealed at its lower end, filled and thereafter sealed at its top end, it is cut off at the last-mentioned end by means of a cutter. The cutter consists of knives 30 and 31 adapted to work in the same manner as the pressing members 26, 27 and in relatively perpendicular directions, the two pairs of knives being adapted
to work alternately with another. A filled and
96 separated tetrahedral package is shown at 28a in
Fig. 18.

According to the form illustrated in Fig. 19 the successive flattening of the tube 25 in relatively spaced horizontal planes is performed by means of a set of cooperating jaw 33, which are rotated through 90° in one direction or the other about the former 23 before every new stroke. According to this form the jaws 33 are mounted on pivoted arms 34 mounted on a sleeve 36 which is rotatably mounted in a frame member 37. The jaws 33 are preferably actuated by a ring 35 movable up and down and coacting with the pivoted arms 34. Before every new stroke of the jaws the sleeve and with it the jaws 33 are rotated 90° in one direction or the other about the former 23 by means of suitable driving means e.g. such as comprise a bevel gear 38. The cutting off of every tetrahedral package 28 from the tube 25 after the package has been sealed at its lower end and filled through the filling tube 32 and thereafter sealed also at the lower end, may be effected by means of a pair of cooperating knives 39 which may be carried by a support 40 which depends from the sleeve 36 and together with the latter rotates 90° about the tube 25 before cutting off every new filled and finished package from the tube 25.

In the form diagrammatically illustrated in Figs. 20 to 22 the web 22 coming from the roll 21 is fed obliquely onto a former 41 which, as will be apparent from the showings,
has the form of a cylinder gradually flattened
97 from its middle in relatively perpendicular planes
towards its opposite ends. On the former 41 the web 22 is formed into a tube 43 with a helical seam 44 formed by adhering together over-lapping edges of the web by means of a roller 42 or the like, which may be heated if circumstances demand. As in the previously described forms the tube 43 leaving the lower end of the former 41 is flattened transversely at successive places alternately along one and the other of two relatively perpendiculer planes by means of a pair of coacting pressing jaws 45, the tube 43 being rotated 90° about the former 41 between successive pressing operations. Where compressed by the jaws 45 the walls of the tube 43 are united by adhesives, welding, crimping, stapling or the like, the jaws 45 being heated if circumstances demand. The tube sections between the successive compressed places are thus formed into approximately tetrahedral containers, and every such container 46 is filled through the filling tube 32 before the container is flattened and sealed at its upper end. The filled and sealed container 46 is severed by means of coacting knives 47. The feeding of the web 22 and the tube 43 may be effected by suitably driven feeding rollers 48 or, for instance, by means of the jaws 45 and the severing knives 47 by moving the jaws 45 and the knives 47 downwards and simultaneously rotating them during periods of contact with the tube 43.

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229/1.5

571333 #3

DIV 40 ~~#2~~ 45

RINT OF DRAWING AS
ORIGINALLY FILED

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FIG. 1

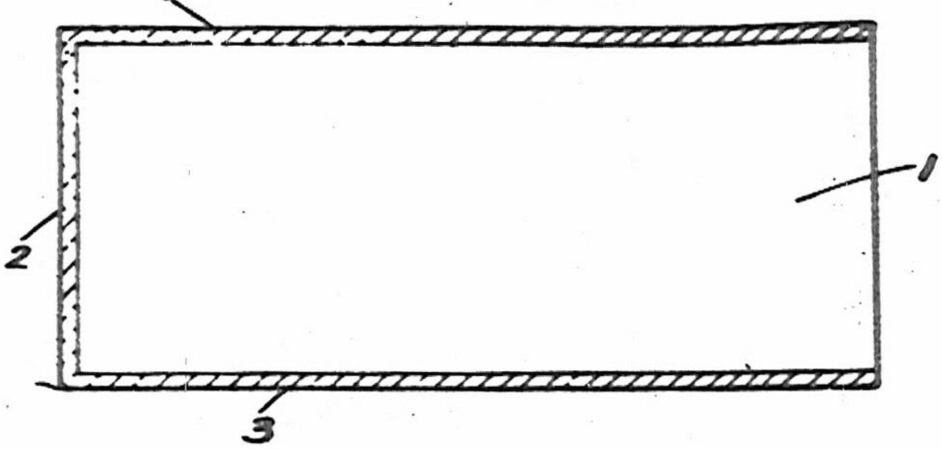


FIG. 2

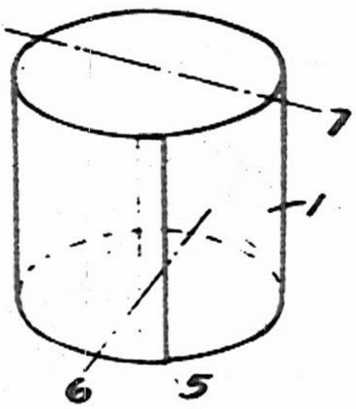


FIG. 3

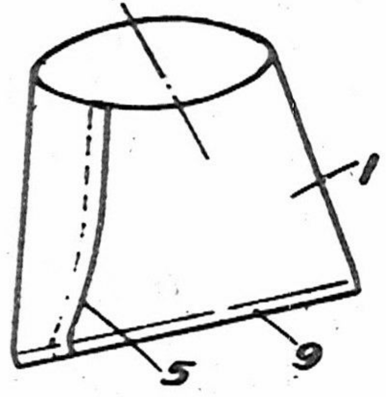


FIG. 4

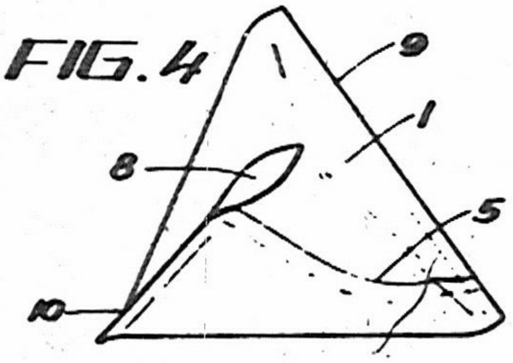
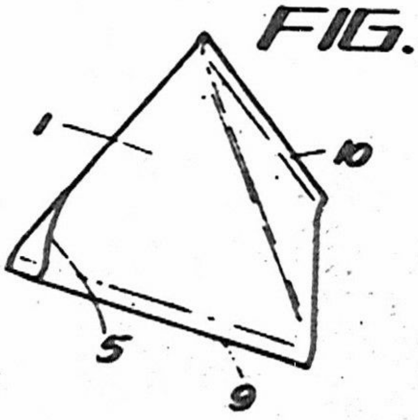


FIG. 5



Inventors:

18

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FIG. 6

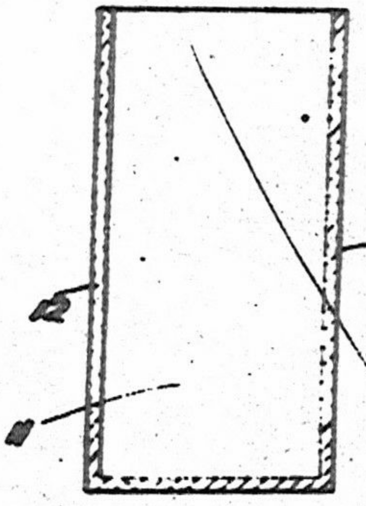

FIG. 7

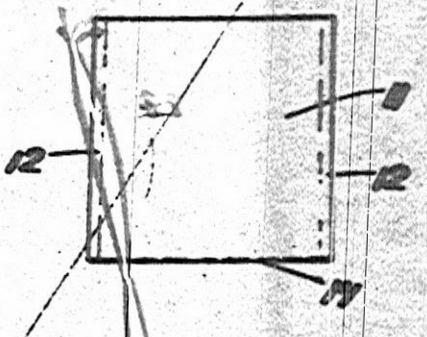

FIG. 8

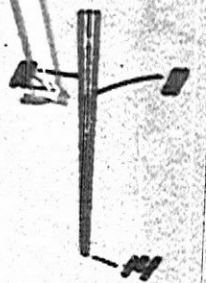

FIG. 11

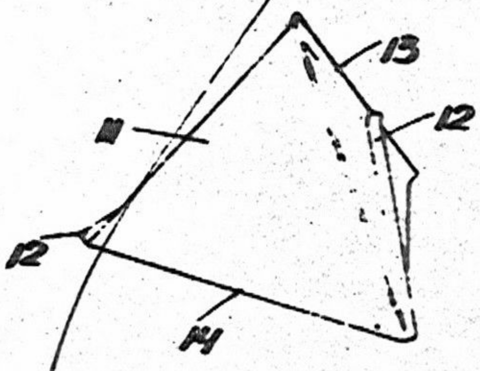

FIG. 9

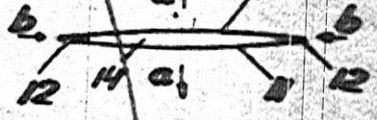

FIG. 10

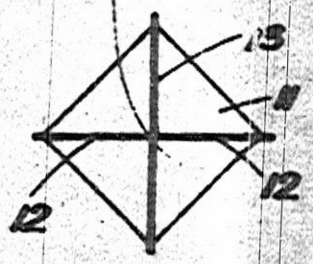

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FIG. 12

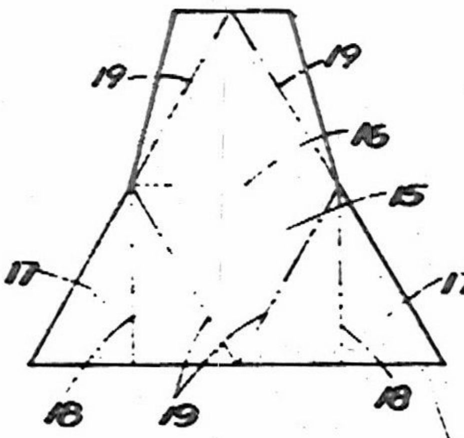


FIG. 15

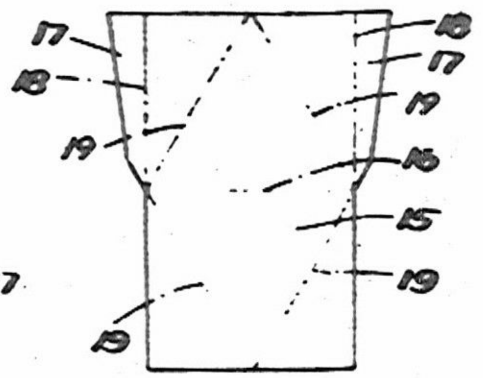


FIG. 13

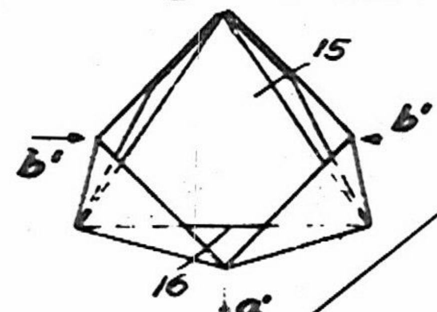


FIG. 16

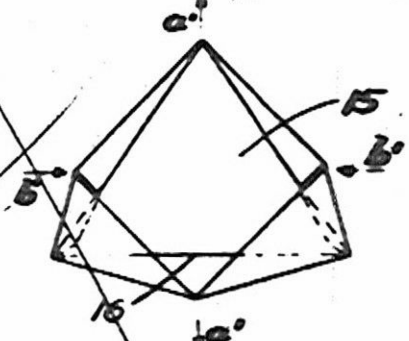


FIG. 14

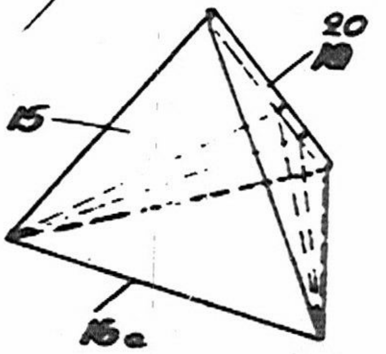
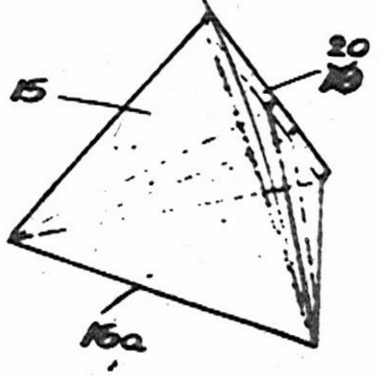


FIG. 17



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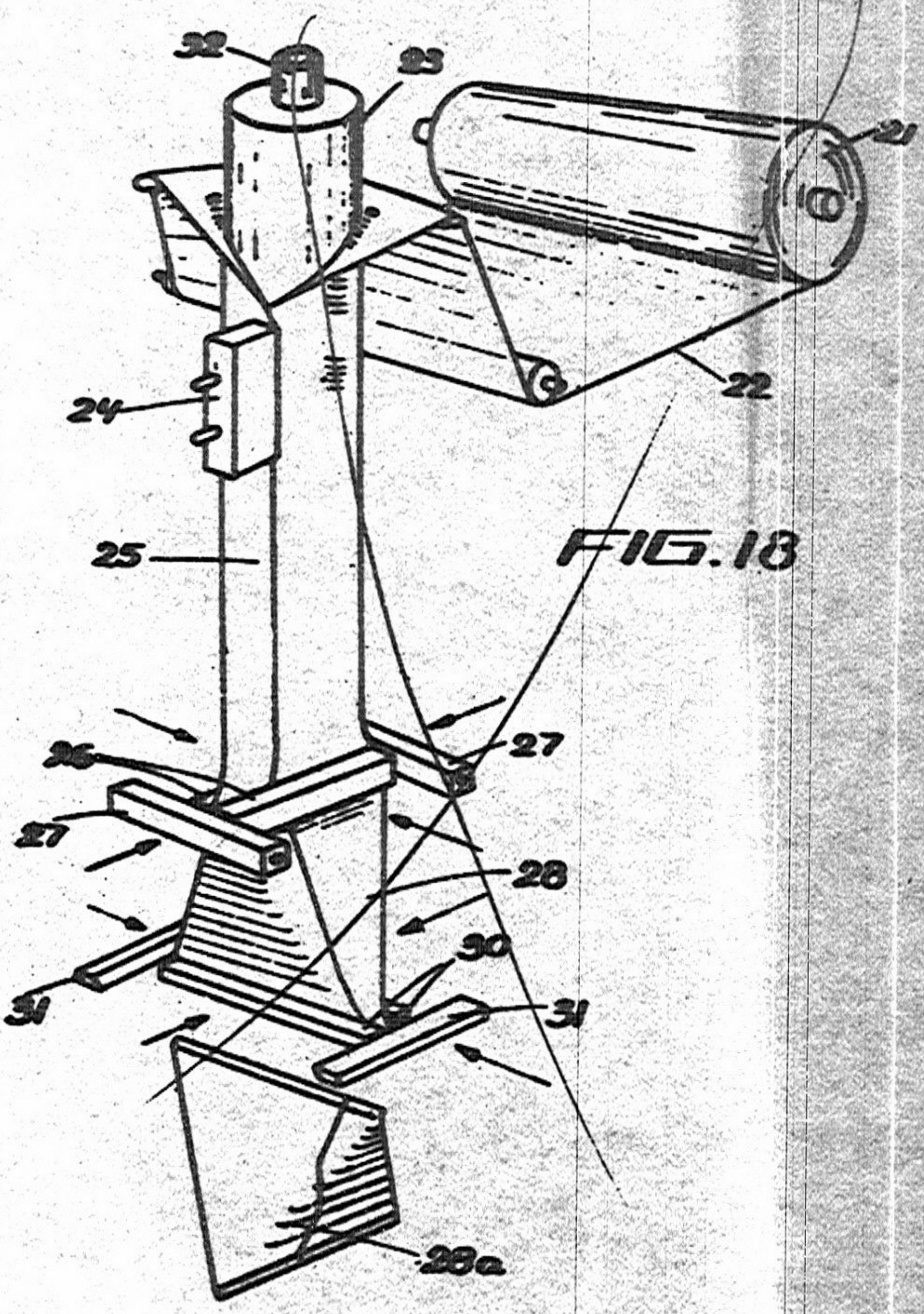

FIG. 18

21

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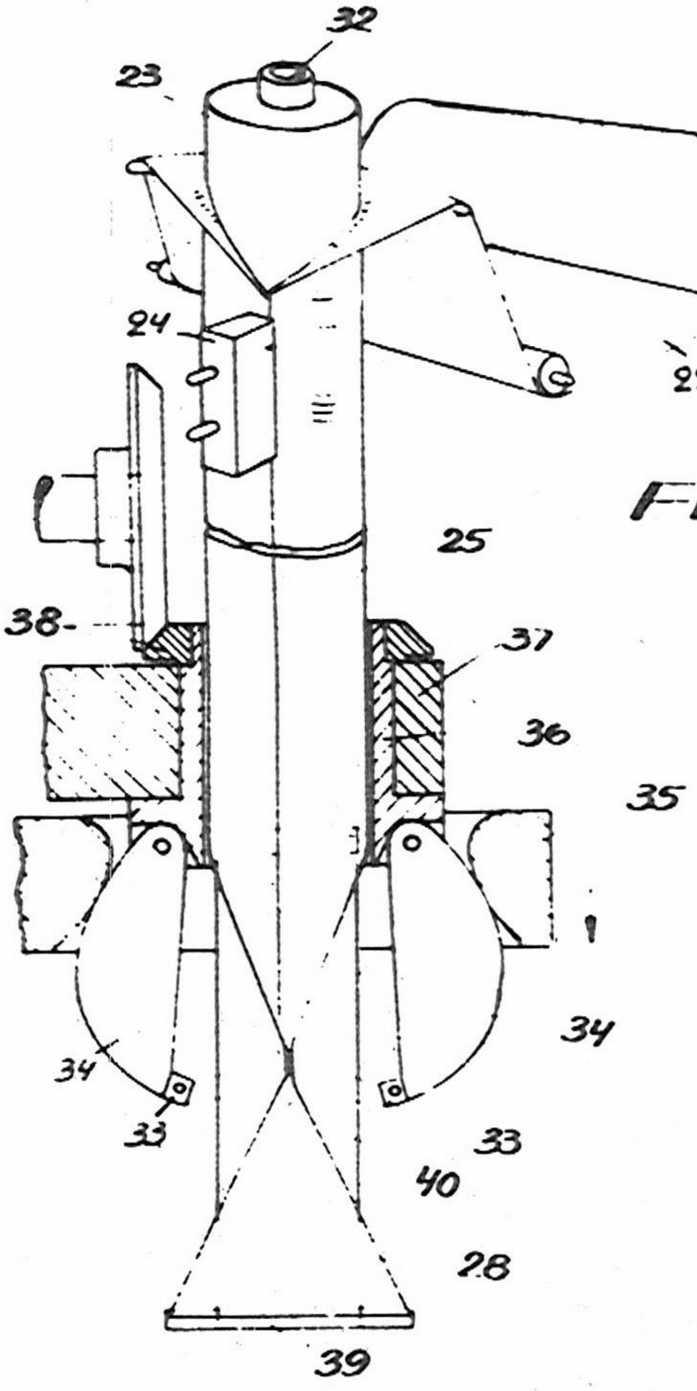

FIG. 19

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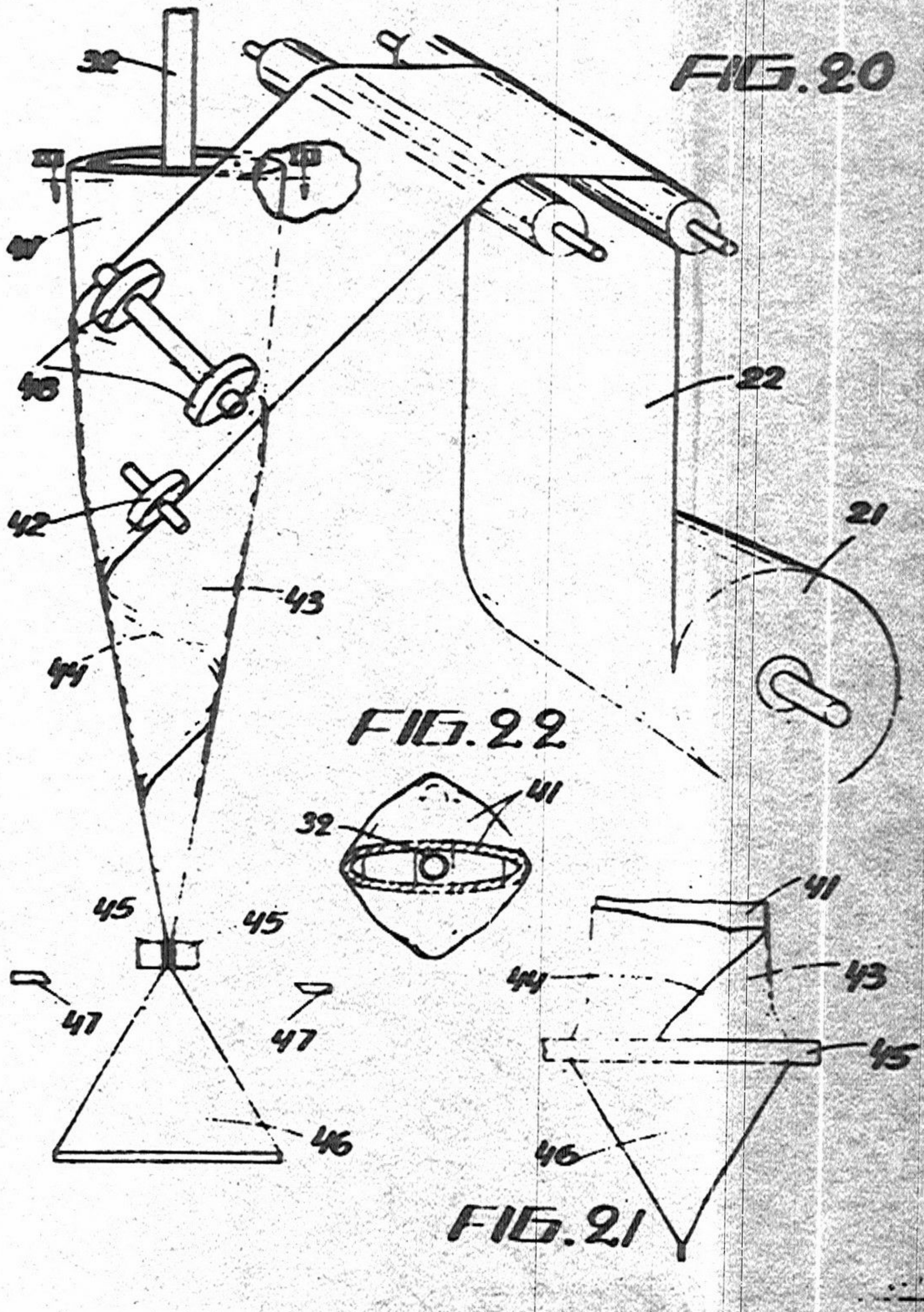

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108 Aug 4 1945

PAPER NO. 4

* * * * * * * * * *

As admitted by applicant, that the machines, shown in Figures 18-22, form no part of his invention, he is required to cancel these figures from the drawing and the brief and detailed description thereof from the specification.

* * * * * * * * * *

110 PAPER NO. 5A

* * * * * * * * * *

AMENDMENT OF JANUARY 24, 1946

Page 2, cancel lines 15 to 17 inclusive, cancel lines 22 to 30 inclusive.

Page 3, cancel lines 1 to 7 inclusive.

Page 3, following line 7 insert the following paragraph:

—The present invention has several advantages over similar containers previously used for holding liquid or semiliquid substances. In many previous inventions the container was elongated and therefore had to be constructed of a relatively rigid material in order to keep its form, when filled with a liquid. Further, the elongated containers cannot stand upright as a bottle and are therefore impractical for use in distributing substances such as milk. Further the previous inventions were not susceptible to packing in
a handy manner. The present invention, due to its
111 construction as a tetrahedron with relatively similar
sides, presents a rigid container and no external bracing is necessary in order to insure against collapse or deformation. The containers may be easily packed in handy and space-saving manner.—

Page 4, line 5, change the period (.) at the end to a semicolon (;) and add —and—

Page 4, cancel line 8 to 30 inclusive.

Page 5, cancel lines 1 to 18 inclusive.

Page 5, line 19, cancel "first" and change "Figs. 1-5" to—the drawings—.

Page 7, cancel lines 19 to 29 inclusive.

Page 8, cancel entire page.

Page 9, cancel lines 1 to 10 inclusive; insert the following paragraph after line 22:

—The present invention may be formed by suitable package making, filling and sealing machines. It may also be made manually—.

Page 9, line 22, correct spelling of "thermoplastic".

Page 9, cancel lines 23 to 29 inclusive.

Cancel pages 10, 11, and 12.

Page 13, cancel lines 1 to 27 inclusive.

* * * * * * * * * *

124 Dec 1 1947

PAPER No. 8

Claim 14 is rejected as being unpatentable over the British patent No. 442,176 of record. There would be no invention in making all six edges of the tetrahedron of this patent equal in length. The change in the dimensions is a matter of degree. No new or unobvious results are seen in this change. If it were found desirable to change the dimensions of the blank shown in Fig. 3 so that the edges of the tetrahedron formed would be equal in length, it would be within the skill of a mechanic to do so.

Claims 1—13 have been cancelled.

This action is final under ex parte Jackson 1926 C. D. 102.

E. J. Drummond
Examiner

* * * * * * * * * *

127 Jul 14 1948

PAPER 10

EXAMINER'S STATEMENT

This is an appeal on the following claim, no claim having been allowed.

Claim 14. A package, especially for liquid substances, comprising a thin and flexible sheet of elongated rectangular form, said sheet forming a tube by having its two shorter edges adhesively secured to each other, said tube forming approximately a tetrahedron by having its two ends flattened and sealed in two relatively perpendicular planes, and the difference in length between the longer and shorter edges of said rectangular sheet being such that all the six edges of said tetrahedron are approximately equal in length.

The reference relied on:

British patent	442,176	229-1.5

The invention claimed consists of a package for liquids comprising the flexible sheet of rectangular form, a sheet forming a tube by having its shorter edges adhesively secured to each other, said tube forming a tetrahedron by having its two ends flattened and sealed in perpendicular planes, the difference in length between the longer and shorter edges of the sheet being such that the six edges of the tetrahedron are equal in length.

The British patent shows a container made out of a rectangular sheet by having the edges secured together and the ends of the container closed by securing them together at right angles to one another. See page 3 of the complete specifications lines 75-108. Figure 2 of the British
128 patent shows a container in the shape of a tetrahedron having six edges, the edges 2 being of the same length and the edges 5 being of the same length.

The Examiner holds that there would be no invention in making the six edges of the tetrahedron of this patent equal in length; this change in the dimensions is a matter of degree. No new or unobvious results are seen by shaping the plank shown in Fig. 3 so that the edges of the tetrahedron formed therefrom would be equal in length.

Respectfully submitted,

E. J. Drummond
Examiner, Division 40.

• • • • • • • • • •

140 PAPER No. 14

This is an appeal from the final rejection of claim 14 which is the only claim now in the case.

The claim reads as follows:

14. A package, especially for liquid substances, comprising a thin and flexible sheet of elongated rectangular form, said sheet forming a tube by having its two shorter edges adhesively secured to each other, said tube forming approximately a tetrahedron by having its two ends flattened and sealed in two relatively perpendicular planes, and the difference in length between the longer and shorter edges of said rectangular sheet being such that all the six edges of said tetrahedron are approximately equal in length.

141 The reference relied upon is:

British Patent 442,176 Feb. 4, 1936

The subject matter of the claim is directed to a package for holding liquid substances. The package is formed from a thin flexible rectangular sheet of material by having its shorter edges adhesively secured to each other to form a tube and by then having its two ends flattened and sealed in relatively perpendicular planes.

The claim has been rejected as unpatentable over the British patent. The British patent discloses a container made out of a rectangular sheet by having its edges secured together to form a tube and the ends of the container closed and sealed in relatively perpendicular planes. The appealed claim defines over the structure shown in the British patent by stating that the difference in length between the longer and shorter edges of the rectangular sheet is such that all of the six edges of the tetrahedron are approximately equal in length. It is the Examiner's opinion that there would be no invention in making the six edges of the patent equal in length since this would merely be a change in the dimensions and therefore a matter of degree.

We are in agreement with the Examiner's rejection of this claim. It seems to us that any invention that may have resided in the specific form or manner of making appellant's container is exhausted by the British patent and merely varying the length of the edges of the sheet in order to vary the proportion thereof in the finished article is clearly nothing but a matter of degree since no new effect or unobvious results are obtained thereby.

142 The decision of the Examiner is affirmed.

In event of appeal attention is directed to *In re* Boyce, 32 CCPA 718; 144 F. (2d) 896; 1944 C. D. 609; 568 O. G. 568; 63 USPQ 80, in regard to specifically including in the appeal notice *all* grounds of rejection in the Examiner's Statement not expressly overruled by the Board.

BOARD OF APPEALS

MARK TAYLOR
Examiner-in-Chief
L. P. MCCANN
Examiner-in-Chief
W. E. WAITE
Examiner-in-Chief
(*Acting*)

March 11, 1949

• • • • • • • • • •

442,176 COMPLETE SPECIFICATION 1 SHEET

[This Drawing is a reproduction of the Original on a reduced scale.]

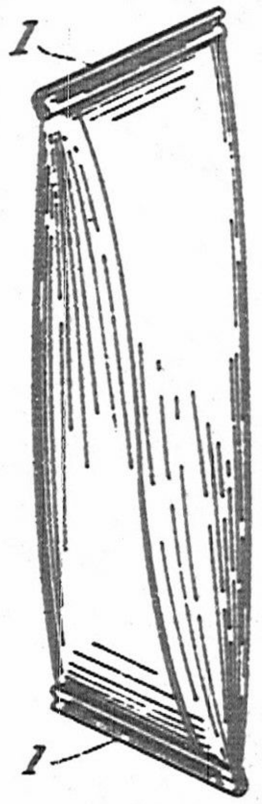

Fig. 1.

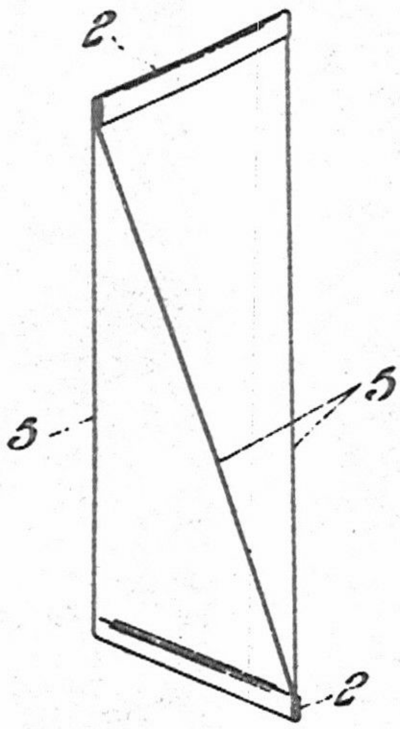

Fig. 2.

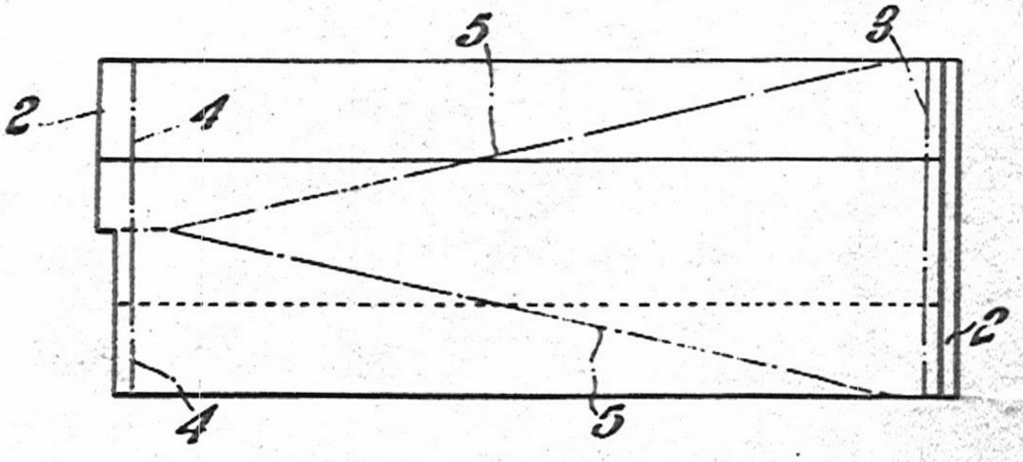

Fig. 3.

Malby & Sons, Photo-Lith.

PATENT SPECIFICATION

Application Date: Nov. 22, 1934. No. 33601/34.
" " Nov. 22, 1934. No. 33602/34.
" " Dec. 17, 1934. No. 36124/34.
" " Jan. 21, 1935. No. 1936/35.

442,176

One Complete Specification Left: April 9, 1935.
(Under Section 16 of the Patents and Designs Acts 1907 to 1932.)
Specification Accepted: Feb. 4, 1936.

PROVISIONAL SPECIFICATION
No. 33601 A.D. 1934.

Improvements in Paper or like Containers

We, Utility Cartons Limited, a British Company, of 2, Arundel Street, Strand, London, W.C.2, and Henry William Samuel Palmer, a British Subject, of the same address, do hereby declare the nature of this invention to be as follows:—

This invention relates to paper or like containers and has particular reference to containers intended for holding milk and other liquids or such liquids such as syrups.

Paper containers of various kinds have been previously proposed for this purpose, and the object of the present invention is to provide a more simple construction which will involve a minimum of machinery in its manufacture and use.

The invention consists broadly of a container consisting of a tube of paper or the like clamped at both ends by flat clamping strips. Preferably the tube forming the body of the container is of circular cross section and the end clamps consist of strips of U or narrow channel section which can, by means of a suitable cramp be compressed onto the ends of the tube which are preferably folded over prior to the clamping operation.

The clamp at one end may be of paper of suitable strength and stiffness and the containers can be delivered to the customer with this one end already closed and sealed.

The customer can then fill the container and seal the open end by means of a metal clamp as before indicated.

The closing clamps at one end may be arranged parallel to or at a right or other angle to the clamp at the other end.

It will be understood that the containers may be waxed, or otherwise treated to render them impervious to the liquid, according to the usual practice.

Dated this 22nd day of November, 1934.

A. A. THORNTON,
Chartered Patent Agent,
7, Essex Street, Strand, London, W.C.2,
For the Applicants.

PROVISIONAL SPECIFICATION
No. 33602 A.D. 1934.

Improvements in Paper or like Containers

We, Utility Cartons Limited, a British Company, of 2, Arundel Street, Strand, London, W.C.2, and Henry William Samuel Palmer, a British Subject, of the same address, do hereby declare the nature of this invention to be as follows:—

The invention relates to paper or like containers particularly for use as carriers for milk and other liquids or semi-liquids.

The object of the invention is to provide a cheap method by means of which such liquids as milk can be marketed.

The invention consists broadly of a container consisting of a body portion of paper or like material open at both ends and adapted to be closed at each end and rendered water tight by folding or rolling over the ends of the body structure.

According to a particular method the container body will consist of waxed paper of suitable strength and flexibility.

In operation the user will take the open ended container and first close one end by bringing together the opposite end portions and folding or rolling them over by means of a tool heated sufficiently to soften the wax. The container can then be filled from the other end which can then be closed by a similar folding or rolling operation or alternatively the open end can be secured by some suitable form of clamping clip.

[Price 1/-]

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HARRY M. HULL, CLERK

Dated this 22nd day of November, 1934.

A. A. THORNTON,
Chartered Patent Agent,
7, Essex Street, Strand, London, W.C.2,
For the Applicants.

PROVISIONAL SPECIFICATION
No. 36124 A.D. 1934.

Improvements in or relating to Paper or like Containers

We, UTILITY CARTONS LIMITED, a British Company, and HENRY WILLIAM SAMUEL PALMER, a British Subject, both of 2, Arundel Street, Strand, London, W.C.2, do hereby declare the nature of this invention to be as follows:—

This invention relates to paper or like containers, particularly containers for milk and other liquids. In the specifications of co-pending applications Nos. 33601 and 33602 of 1934 there are described containers formed from a tube of paper or the like closed at each end by collapsing the sides to a straight line and securing the edges by rolling, by folding and waxing, or clamping with a paper or metal strip of U-section.

Such containers could be made by wrapping a strip of paper or the like around a cylindrical mandrel and securing the edges together to form a tube of circular cross section, and then collapsing the ends of the tube. This method of manufacture is slow and consequently expensive.

According to the present invention containers are made by folding over the two side edges of a continuous strip of paper or the like and securing them together to form a flat or collapsed tube. This tube is cut into sections and one end of each section is closed in one of the ways above referred to. The container (which at this stage has the form of a simple paper bag) is then filled and the open end is closed by collapsing it along a line at right angles to the line of the other end and sealing the edges in one of the ways above mentioned.

The sections of the collapsed tube may be creased or scored along lines running from the extremities of one end to the centre of the other end. When this latter end is closed by collapsing it along a line perpendicular to the plane of the flat tube, the material of the tube bends along the scored lines and the container takes the form of a tetrahedron whose four faces are congruent isoceles triangles: that is the container has the same shape as the container particularly described in the specification of co-pending application No. 36125 of 1934.

The paper or the like of which the container is made is preferably waxed or otherwise treated to render it liquid proof. This waxing may be effected at any convenient stage of the process of manufacture; we have found that the wax coating is not injured by the bending which takes place when the container is erected.

Dated this 17th day of December, 1934.

A. A. THORNTON,
Chartered Patent Agent,
7, Essex Street, Strand, London, W.C.2,
For the Applicants.

PROVISIONAL SPECIFICATION
No. 1936 A.D. 1935.

Improvements in Paper or like Containers

We, UTILITY CARTONS LIMITED, a British Company, and HENRY WILLIAM SAMUEL PALMER, a British Subject, both of 2, Arundel Street, Strand, London, W.C.2, do hereby declare the nature of this invention to be as follows:—

This invention relates to paper or like containers, particularly containers for milk and other liquids. More particularly, the invention has reference to containers formed from a tube of paper or the like closed at each end by collapsing the sides to a straight line (the two ends being preferably at right angles to one another) and securing the edges together. Containers of this kind and a preferred method of making them are described in the specifications of our copending applications Nos. 33601, 33602 and 36124, all of the year 1934.

In containers in accordance with the present invention each end, or one of the ends, of the container is closed by folding over together the contacting extremities of the two sides of the container and securing them to each other and to

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HARRY M. HULL, CLERK
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the body of the container by wax or other adhesive. According to the invention the extremity of the side which is to be folded outermost projects beyond the extremity of the other side, so that when the two extremities are folded over together the outermost one completely covers the inner one and itself contacts with the body of the container. A very neat and efficient seal is thus provided.

In one method of constructing a container in accordance with the present invention, the container is formed from a substantially rectangular blank divided into three panels by two parallel scored lines running lengthwise of the blank. The two side panels of the blank are adapted to be folded over the centre panel and to be secured together to form a flat or collapsed tube. At one end of the blank, intended to form the bottom of the container, the two side panels are cut some quarter inch shorter than the centre panel. One wall of the flat tube formed by folding over the side panels will thus be a quarter of an inch shorter than the other, and on folding over the two sides together about a line parallel to the end of the blank, the extremity of the shorter wall will be completely covered by the extremity of the longer. At the other or top end the blank is cut away to a depth of some quarter inch, from the centre of the centre panel to one side of the blank. This end of the container is closed by collapsing it along a line perpendicular to the plane of the flat tube and folding the longer of the meeting edges over the shorter, as at the bottom end of the container.

Dated this 21st day of January, 1935.
A. A. THORNTON,
Chartered Patent Agent,
7, Essex Street, Strand, London, W.C.2,
For the Applicants.

COMPLETE SPECIFICATION

Improvements in Paper or like Containers

We, UTILITY CARTONS LIMITED, a British Company, of 2, Arundel Street, Strand, London, W.C.2, and HENRY WILLIAM SAMUEL PALMER, a British Subject, of the same address, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to paper or like containers and has particular reference to containers for milk or other liquids or semi-liquids such as syrups.

It has been proposed to make collapsible tubes for containing liquids or plastic material, such as oil paints shoe polish and honey, of transparent flexible material such as cellophane by cutting a length of tubing into short sections and clamping the ends of the short tubes at right angles to each other the contents of the tube being extruded by pressing one end of the tube after the fashion of the familiar tooth paste containers.

A milk or liquid container according to my invention, although larger in size is of substantially the same form but differs in the essential characteristics that it is made of paper or like material so treated as to be liquid tight and of sufficient stiffness to ensure substantial rigidity when in use, so that it will be suitable for containing liquids such as milk.

A container in accordance with the invention is formed by a tube of paper or like material closed at each end by collapsing the sides to a straight line and securing the meeting edges together and waxed or so treated that a water tight and substantially rigid container is formed. Preferably the two ends of the container are substantially at right angles to one another. The edges may be secured together by coating them with wax or other adhesive and folding or rolling them upon themselves, or by clamping them together with a clip of metal or other material, or in any other convenient manner. The two ends of any container may, of course, be closed in different ways. Where the two ends of the container are at right angles to one another the walls of the container may be scored along lines joining the extremities of each end to each of the extremities of the other end, so that the container has the form of a tetrahedron.

The container could be made from a tube of circular cross section formed by wrapping a strip of paper or the like around a circular mandrel and securing the meeting edges together; this method of manufacture is slow and consequently expensive. Preferably, therefore, the container is made by folding over the two side edges of a continuous strip of paper or the like, securing the edges together to form a flat or collapsed tube, cutting the tube into sections and closing one end of each section. The container is then filled and the open end is closed by collapsing it along a line at right angles to the line of the other end and securing the meeting edges together.

A further advantage of this method of manufacture is that the unfilled containers, which consist of flat tubular sections having one of their ends closed, may be packed for transport in a very small space. The user erects the container by pressing together the extremities of the open end, fills the container and seals the open end. The waxing or other treatment necessary to render the container waterproof and rigid may be effected at any convenient stage in the process of manufacture; we have found that the wax coating is not materially injured by the bending which takes place when the container is erected.

The containers are illustrated in the accompanying drawing in which figures 1 and 2 are perspective views of two containers in accordance with the invention and figure 3 is a plan view of the flat or collapsed tube from which the container shown in figure 2 is formed.

The container shown in figure 1 consists of a tube of paper or like material which is waxed or otherwise treated to render it impervious to liquid. This waxing also assists in rendering the container substantially rigid if the paper employed is not of sufficient thickness for that purpose. The lower end of the tube is closed by collapsing the walls of the tube to a straight line and securing the meeting edges together by inserting them in a U-section sheet metal clip 1 and then clamping the clip; the edges of the tube walls are preferably folded over before insertion in the metal clip. After the container has been filled, the upper end is closed by collapsing the walls along a line at right angles to that of the lower end and then securing the edges together by means of a second metal clip 1. Either or both ends of the tube may be closed in other ways than that described; for example they may be treated with wax or other adhesive and then rolled or folded upon themselves.

Figure 3 shows one section of a flat tube from which a preferred form of container in accordance with the invention can be formed, it being intended in this case that the ends of the tube should be closed by treating the walls of the tube with an adhesive and folding them over upon themselves. In order to produce a neat and effective closure the extremity of the wall which is to be folded outermost is made to project beyond the extremity of the opposite wall. Thus at the right hand end of the tube shown the upper wall is cut away to a depth of some quarter inch, so that a portion 2 of the lower wall projects beyond it. When the end of the tube is folded over about the broken line 3 (which may be scored on the paper tube) the extremity of the lower wall completely covers the extremity of the upper wall and itself contacts with the body of the container. Similarly, at the left hand end of the tube (which is closed, after the container has been filled, by collapsing it along a line at right angles to the plane of the tube and then folding over the extremities about the broken line 4) both, the upper and the lower walls of the tube are cut away from half their breadth to a depth of some quarter inch. The walls of the tube are scored along the lines joining the extremities of each end to each of the extremities of the other end, as indicated by the broken lines 5. The container formed by erecting the tube is shown in figure 2. It has the form of a tetrahedron whose four faces are congruent isosceles triangles; that is it has the same shape as the container particularly described and claimed in the specification of our co-pending application No. 36125 of 1934 (Serial No. 442,180).

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A container formed by a tube of paper or like material closed at each end by collapsing the sides to a straight line and securing the meeting edges of the walls together and waxed or so treated that a water tight and substantially rigid container is formed.

2. A container in accordance with claim 1 in which the two ends of the container are substantially at right angles to one another.

3. A container in accordance with claim 2 in which the walls of the container are scored along lines joining the extremities of each end to each of the extremities of the other end, so that the container has the form of a tetrahedron.

4. A container in accordance with any one of claims 1 to 3, having the meeting edges of the walls at one or both ends of the container secured together by coating them with an adhesive and rolling them upon themselves.

5. A container in accordance with any one of claims 1 to 3 having the meeting edges of the walls at one or both ends of the container secured together by clamping them together with a clip.

6. A container in accordance with claim

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5, in which the meeting edges of the walls are folded upon themselves before the final securing clip is applied.

7. A container in accordance with any one of claims 1 to 3, having the meeting edges of the walls at one or both ends of the container secured together by coating them with adhesive and folding them upon themselves.

8. A container in accordance with claim 6 or 7 in which the end of that wall of the tube which is folded outermost is extended beyond the end of the opposite wall.

9. A method of making a container in accordance with any of the preceding claims, which comprises forming a flat or collapsed tube of paper or the like, closing one end of the tube, collapsing the other end of the tube along a line substantially at right angles to the closed end of the tube and securing together the meeting edges of the walls at the open end of the tube.

10. The improved paper or like container substantially as herein described with reference either to figure 1 or to figures 2 and 3 of the accompanying drawing.

Dated this 9th day of April, 1935.
A. A. THORNTON,
Chartered Patent Agent,
7, Essex Street, Strand, London, W.C.2,
For the Applicants.

Reference has been directed in pursuance of Section 8, sub-section (2), of the Patents and Designs Acts 1907 to 1932, to Specification No. 433,480.

Leamington Spa: Printed for His Majesty's Stationery Office, by the Courier Press.—1936.

ERRATA

SPECIFICATION No. 442,176.

Page 2, line 16, *for* " or clamping " *read* " or by clamping "

Page 2, line 53, *after* " 1934 " *insert* " (Serial No. 442,180) "

THE PATENT OFFICE,
March 28th, 1936.

AVAILABLE

BRIEF FOR APPELLEE

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

United States Court of Appeals
For the
District of Columbia Circuit
FILED NOV 1 1951
Joseph W. Stewart
CLERK

APPEAL NO. 11,129

AKTIEBOLAGET AKERLUND & RAUSING, APPELLANT

v.

JOHN A. MARZALL, COMMISSIONER OF PATENTS, APPELLEE

APPEAL FROM THE JUDGMENT OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

E. L. REYNOLDS,
Solicitor, United States Patent Office,
Attorney for Appellee.

CLARENCE W. MOORE,
Of Counsel.

APPEAL NO. 11,129

STATEMENT OF QUESTION PRESENTED

In the opinion of appellee, the sole question presented for determination on this appeal is:

Was it error to find that a container in the form of a tetrahedron in which all six edges are approximately equal is not inventively different from a container in the form of a tetrahedron in which the two ends are shorter than the four other, equal edges?

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United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

APPEAL NO. 11,129

AKTIEBOLAGET AKERLUND & RAUSING, APPELLANT

v.

JOHN A. MARZALL, COMMISSIONER OF PATENTS, APPELLEE

APPEAL FROM THE JUDGMENT OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

BRIEF FOR THE COMMISSIONER OF PATENTS

INTRODUCTION

Aktiebolaget Akerlund & Rausing, assignee of the application for patent of Karl Erik Sven Wallenberg, Serial No. 571,333, filed in the Patent Office on January 4, 1945, appeals from the judgment of the District Court (J. A. 7) dismissing its complaint in an action brought under Section 4915 R. S. (35 U. S. C. 63). Like the examiner and the Board of Appeals, the District Court refused to authorize the issuance to appellant of a patent containing claim 14 of that application.

Claim 14 (J. A. 2, 52, and 54) defines a "package, especially for liquid substances." The three tribunals below concurred in holding that that claim is unpatentable over British patent, No. 442,176, dated February 4, 1936.

THE APPLICATION ON APPEAL

As filed, the Wallenberg application contained drawings (J. A. 45 to 50) and descriptions (J. A. 34 to 43) of several forms of packages, and of a machine for making, filling, and sealing those packages. The disclosure, however, was subsequently amended (J. A. 51 and 52) to restrict it solely to the form of package shown in Figs. 1 to 5 (J. A. 45).

According to the remaining description (J. A. 34, final two paragraphs; J. A. 35, first, second, fourth, and sixth paragraphs; J. A. 36, first six paragraphs; J. A. 37, final paragraph; J. A. 38; J. A. 39, first two lines; J. A. 40, first paragraph), the package shown in said Figs. 1 to 5 is formed from an elongated rectangular sheet of flexible material (Fig. 1), such as paper, by first adhesively securing the two shorter edges of that blank to each other to form a tube (Fig. 2), and then flattening and sealing the two ends of that tube in two relatively perpendicular planes (Figs. 3 and 4). The finished package (Fig. 5) has approximately the shape of a regular tetrahedron, with all six edges approximately equal in length.

THE REFERENCE

The single reference found by the three tribunals below to negative patentability of the Wallenberg package or container is, as already stated, British patent No. 442,176 (J. A. 57 to 62). The patented package is formed from such a tube as illustrated in Fig. 3 (J. A. 57). This figure shows the tube in its flat or collapsed condition (J. A. 61, lines 27 to 29). The blank, of paper or like material (J. A. 60, lines 66 to 74), from which the tube is made, hence has a width approximately twice the width of the collapsed tube, and the blank accordingly is oblong. To make the tube, the British patentees secure the longer edges of the blank together (See J. A. 60, line 98 to J. A. 61, line 6). The patentees indicate (J. A. 60, lines 82 to 84; J. A. 61, lines 37 to 54, and claim 2) that the two ends of their tube are flattened and secured in two relatively perpendicular planes. As shown in Figs. 1 and 2 (J. A. 57), the completed patented package has the general form of a tetrahedron in which the two ends are shorter than the four other, equal edges.

THE CLAIM

The lone claim sought by appellant reads, as follows:

> "A package, especially for liquid substances, comprising a thin and flexible sheet of elongated rectangular form, said sheet forming a tube by having its two shorter edges adhesively secured to each other, said tube forming approximately a tetrahedron by having its two ends flattened and sealed in two relatively perpendicular planes, and the difference in length between the longer and shorter edges of said rectangular sheet being such that all the six edges of said tetrahedron are approximately equal in length."

From the foregoing summary of the disclosure of the British patent, it will appear that this claim purports to distinguish over the patented package by reference to the dimensions or proportions of the blank employed. The claim recites that the "difference in length between the longer and shorter edges" of the elongated rectangular blank is such "that all six edges of" the formed tetrahedron "are approximately equal in length."

SUMMARY OF ARGUMENT

Appellant's package is unpatentable over the prior British patent cited. It is a general rule that a mere carrying forward of a prior concept, a change only in form, proportions, or degree, does not amount to invention. Factors, pointing to the presence of invention, such as changing success to failure, or satisfying a long felt want, are not established by the evidence offered by appellant. Others have provided a satisfactory package.

ARGUMENT

The Board of Appeals (J. A. 55) and the District Court (J. A. 6, Findings of Fact Nos. 4 and 5; J. A. 33, final paragraph) followed the examiner (J. A. 53) in holding that the applicant, Wallenberg, did not exercise invention in varying the dimensions or proportions of the blank disclosed in British patent No. 442,176, and thereby making the six edges of the tetrahedron equal in length.

The general rule is that a mere carrying forward or new or more extended application of a prior concept, "a change only in form, proportions, or degree," does not arise to the dignity of invention. *Smith* v. *Nichols,* 21 Wall. 112; *In re Marshutz,* 13 App. D. C. 228; *In re Iwan,* 17 App. D. C. 566.

Appellant attempts to avoid the effect of that general rule in several ways. Thus, upon the basis of the testimony of A. A. Thornton, the British patent attorney who solicited British patent No. 442,176, appellant insists that the container covered by that patent was a "failure," whereas the container disclosed and claimed in the Wallenberg application is a success. The burden of Thornton's testimony (J. A. 20 and 21), however, is that the British package failed by reason of the adhesive used to close it. According to this witness, "some food regulations" required the top of the container to be waxed, and a closing seal could not be obtained with the wax. "We didn't," he said, "put any further adhesive on because we couldn't." Trouble with the bottom of the container, he stated, was overcome by closing "that end with an elastic glue." In response to the inquiry as to whether the problem was not, generally, with an adhesive, Thornton responded, as follows:

> "The problem was to get a closure at the top. I think that it may well have been that the sealing wax was the vital thing."

No solution of this problem of an adhesive is evidenced in the Wallenberg application. Wallenberg indifferently specifies (J. A. 38) that the "sealing or securing of the flattened ends of the package may be produced not only by gumming or the like but also by folding, crimping, stitching, stapling, welding, soldering or the like, or by any suitable combination of such sealing or securing methods." Furthermore, Wallenberg did not recognize that different sheet materials and different adhesives might give different results (J. A. 38, seventh sentence; J. A. 40, first paragraph). In his specification, Wallenberg states:

> "In all forms of the invention the sheet material used for the manufacture of the tetrahedral containers may be of any suitable kind such as lined or unlined paper, waterproof paper, greaseproof paper, metal foils or thin sheets as well as foils or other flexible sheets of rubber or of synthetic materials or plastics such as celluloid, cellophane, etc. When the sheet material consists of, or is coated or impregnated with, a thermoplastic, the sealing of the container may be performed by means of melting or welding with heat possibly in conjunction with a hardening of the thermoplastic."

It follows from the foregoing considerations that Wallenberg can not be credited with having "provided the final step that proved the difference between success and failure," which the majority opinion in *Lincoln Stores, Inc.,* v. *Nashua Mfg. Co.,* 157 F. 2d 154, cited by appellant, suggests is a "factor which has been accorded considerable recognition in the courts" in determining whether invention is present.

Adequate basis likewise is lacking in the case at bar for resort by appellant to the doctrine (See Brief, page 12) that the "satisfaction of an old and recognized want is highly persuasive of invention." For aught in the record to the contrary, Wallenberg's container may never have passed beyond the experimental stage. Evidence is absent as to its commercial acceptance, either in this country or even in Sweden.

Appellant urges (See brief, page 9, first paragraph, et passim) that the Wallenberg container "fulfills the requirements of the packaging industry, the retailer and the ultimate consumer." So far as the qualities of the container are concerned, those purported requirements would appear to be at least equally fulfilled and "attained" (See Brief for Appellant, page 3, second paragraph) by the "square packages" or paper milk cartons, in commercial use, to which reference is made in the record (J. A. 32). As fully indicated earlier in this brief, the Wallenberg package only is in issue, and not the machine for making, filling, and sealing it. The District Court would seem to have been deploring appellant's emphasis on the machine in making the remark (J. A. 33) to which appellant takes exception. That remark did not lack support in the record, for appellant's director, Torudd, had testified, as follows, during his direct examination (J. A. 26):

> "The Court: What machines did you have in mind?
> "The Witness: I had in mind a machine that could fill in a continuous process.
> "The Court: Have you seen it?
> "The Witness: I have seen all the American——
> "The Court: Have you seen that machine?
> "The Witness: The one we have now?
> "The Court: No. The one that you say would do the job.
> "The Witness: No.
> "The Court: Is it in existence?
> "The Witness: It did not exist at all."

Furthermore, the remark of the District Court is reflected in none of the findings of the decision rendered (J. A. 5 and 6).

Appellant's own expert witness, Southwick, would appear (J. A. 14) to ascribe little significance to the change of dimensions whereby the claim on appeal is supposed to distinguish from the disclosure of British patent No. 442,176. He, instead (J. A. 12 and 13), accords weight to features of the patented package which are merely "preferred" by the British patentees and are not essential to the construction of their package. In view of the breadth of the several limitations of the claim, these features can have no bearing upon the effectiveness of the British patent as a reference against the claim.

CONCLUSION

It is respectfully submitted that invention was not required to devise the package claimed by appellant, and that this Court, like the three tribunals below, should refuse to authorize the issuance of a patent thereon.

E. L. REYNOLDS,
Solicitor, U. S. Patent Office,
Attorney for Appellee.

CLARENCE W. MOORE,
Of Counsel.

OCTOBER, 1951.

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REPLY BRIEF FOR APPELLANT

IN THE

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

United States Court of Appeals
For the
District of Columbia Circuit

FILED FEB 15 1952

Joseph W. Stewart
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No. 11,129

AKTIEBOLAGET AKERLUND & RAUSING, *Appellant*,

v.

JOHN A. MARZALL, COMMISSIONER OF PATENTS, *Appellee*.

Appeal from the United States District Court for the District of Columbia.

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IN THE

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 11,129

AKTIEBOLAGET AKERLUND & RAUSING, *Appellant,*

v.

JOHN A. MARZALL, COMMISSIONER OF PATENTS, *Appellee.*

Appeal from the United States District Court for the District of Columbia.

REPLY BRIEF FOR APPELLANT.

I. REBUTTAL OF APPELLEE'S ASSERTED CONTENTIONS.

The Brief for Appellee presents a confusing picture of the facts established in the Court below, as well as those set forth in Appellant's Brief.

II. APPELLEE'S STATEMENT OF QUESTION PRESENTED INCOMPLETE.

The "Statement of Question Presented" as set forth by Appellee (see Brief for Appellee, page I) is submitted as not complete. The question presented for determination on this Appeal is whether or not the manifest, highly improved characteristics of the present container resulting from the differences between the container of the British patent and the present container which include rigidity, stability, outstanding economy, outstanding volume per space characteristics, simplicity of structure resulting in speed of construction, results in invention. The "Statement of Question Presented" as posed by Appellee overlooks these facts clearly established in the evidence presented in the Court below.

III. APPELLEE'S APPRAISAL OF CLAIM INCORRECT.

The Appellee, in Appellee's Brief, last paragraph of page 3, continued on page 4, states that the single claim on appeal purports to distinguish over the patented package by reference to the dimensions or proportions of the blank employed and reference to the difference in length between the longer and shorter edges, but omits to include the fact that the sheet is formed into a tube by having its "two shorter edges adhesively secured to each other" which is critical in the formation of a substantially regular tetrahedron which provides new and outstanding results not attainable by the British construction.

IV. REBUTTAL OF APPELLEE'S ARGUMENT.

Appellant has no argument with the general rule as set forth in Appellee's Brief, page 4, paragraph 2, and the last paragraph, nor to the decisions recited in support of this view. The facts and circumstances in the present Appeal, however, remove the present container from the doctrine set forth as constituting the general rule.

As clearly shown in Appellant's Exhibit 19, the changes effected in arriving at the present container result in new, highly improved and totally unexpected results which satisfied not only long sought requirements of the packaging industry in general (J.A. 9, 10, 11, 13 and 14) but also the efforts of the milk packaging industry as clearly stated by an expert in this field (J.A. 25 and 27 and Appellant's Exhibit 19). Furthermore, it was clearly shown (J.A. 20) that the solution of the problem long sought by the British patentee was entirely unobvious and that the attempts of the British patentee, due to failure to recognize the solution of the problem and solve it, resulted in abandonment of the British attempts and experiments because they could not produce a carton that would stand up to its job and that their attempts completely failed (J.A. 19).

The evidence produced by Appellant clearly and unequivocally showed failure of the prior art (J.S. 18 and 19), whereas the present container does satisfy all of the requirements of the milk packaging industry (J.A. 25 and Appellant's Exhibit 19), which consequently proves success in satisfying all of the requirements whereas the abandoned British carton was a failure due to its inability to meet the requirements.

The long felt want has been established unequivocally by the extensive experimental work of the British company (J.A. 18, 24 and 25) and as shown in Appellant's Exhibit 19, the long felt want has only now been satisfied.

Appellee states in his Brief, page 4, paragraph 2, "others have provided a satisfactory package". This has nothing to do with the present issue. There is no doubt that there are several packages on the market which effect a good job, but this in no way detracts from the outstanding characteristics of the present container, nor does it enhance the value of the British patent as an anticipation of the present container as claimed. The present container combines, due to its form and construction, handiness for the housewife and the retailer, with very substantial savings in critical material and as compared, for example, with square paper milk containers between 30% and 85% of material, depending upon the size of the package, as well as substantial cost savings in fabricating and filling the container, and savings in manpower and transportation costs (see Appellant's Exhibit 19).

Appellee in his Brief, page 5, extracts a small portion of the testimony of A. A. Thornton, the British patent attorney who solicited British patent No. 442,176 and attempts to utilize the brief extracts in a manner not consonant with the remainder of the testimony. The English package referred to is a package, which has to be made by the converter as a collapsed package open in one end. The dairy man has then to erect the package, fill the milk in it and to close it. For the bottom there can be used an adhesive, which as all adhesives does not bind until after some time. When it binds it will be perfectly all right. But it is of course *absolutely impossible for the man in the dairy,* filling the milk in the erected package *to use an adhesive* to close it. Regulations for the dairy industry would prevent this in the first place.

Mr. Thornton who was very closely connected with the British inventor knew that "we didn't put any further adhesive on because we couldn't". It is as impossible today, as it was when the British invention was made.

It is also incorrect to state that according to Mr. Thornton's evidence "the British package failed by reason of the adhesive used to close it" (Appellee's Brief, page 5). On page 18 last three lines and page 19 first seven lines of the Joint Appendix, Mr. Thornton stated as regards the reason for failure of the British carton "Don't ask me. I don't know. We never knew. I don't know. I have a theory that it was the jolting, the hydraulic action bumping against this corner, added to what I thought was that these were flexible. If they were packed close together you got pressure, also, which I think was one of the reasons, but I wouldn't say." This was Mr. Thornton's theory for the failure of the British package and this is substantiated in Appellant's Exhibit No. 19.

Appellee's Brief, page 5, sets forth that no solution of the problem of an adhesive is evidenced in the Wallenberg application. Appellant is certainly not required to perfect a reference utilized by the Patent Office as a basis for rejection of the application on appeal. Wallenberg was not faced with a problem of adhesives in any way, due to the construction and shape of his container and the manner in which his container is fabricated. The passage of appellant's specification referred to in Appellee's Brief, page 6, substantiates the point that adhesives are not critical to the present container. Furthermore and as is well known, an inventor in preparing and filing an application for patent includes alternatives which can be utilized, some of which may not be as effective as others, but this does not detract from the efficiency of the over-all container.

There is no question that the British construction is a failure and the evidence adduced clearly shows that the present container overcomes the reasons for the failure of the British package. Appellant's Exhibit No. 19 clearly sets forth the differences which have resulted in success and consequently the decision in *Lincoln Stores, Inc.* v. *Nashua Mfg. Co.* cited by the Appellant applies to the facts in this appeal.

Wallenberg's container has passed beyond the experimental stage contrary to Appellee's assumptions as evidenced by Appellant's Exhibit 19. Commercial acceptance, as is well known, is something which comes slowly as an invention is slowly placed on the market. Such a condition is not necessary to patentability. Subsequent to the trial in the Court below, extensive commercial acceptance of the present package has been made. The lack of such commercial acceptance at the time of the trial was primarily due to the fact that at that time it had not been widely presented to commercial interests. In any event, however, the lack of such evidence in the Court below is not a condition governing the patentability of the present device.

Appellee's statement on page 7 of Appellee's Brief regarding the "square packages" is entirely inapt and not in issue as brought forth by the attorney for Appellee (J.A.

32, lines 6 and 7 from bottom). In any event, however, the present container does provide tremendous improvements over presently used paper containers for milk. There is absolutely no evidence to support Appellee's statement that "those purported requirements would appear to be at least equally fulfilled * * * by the paper milk cartons in commercial use." The present appeal is not directed to whether or not present paper milk cartons are satisfactory, but whether or not the present container is patentable over the abandoned British carton evidenced by British patent 442,176.

Appellee in his Brief, page 7, extracts a small portion of testimony of the witness Torudd and places thereon an erroneous interpretation. By reference to the testimony of this witness (J.A. 25) it will be seen that the witness was asked what requirements must be met by the product and those requirements were established in the course of research in 1935. The Court posed the question (J.A. 26), "What machines *did* you have in mind?" This question was obviously interpreted by the witness as referring to the time when the requirements were set up, namely 1935, as evidenced by the witness' reply, "I *had* in mind a machine * * * ". This is further borne out in the further questioning by the Court (J.A. 26). The Court proceeded to ask, "have you seen it?" This changed the questioning from the past to the present and resulted in confusion in the witness' mind especially in view of the fact that the witness is a subject of Sweden and not entirely familiar with the English language. The witness subsequently answered, "The one we have now?" Obviously this question was posed by the witness to be absolutely sure that the Court referred to the present time (*have* you seen) or if the Court referred to the past as when the witness was interrupted by "What machine *did* you * * * " The Court replied "No. The one that you say *would* do the job." The witness, therefore, interpreted the Court's questioning to refer to 1935 when the various requirements were set up by the witness and by the research department of the present appellant. The witness consequently stated "No" and also "It *did* not exist at all". The witness' answer, therefore, referred to the situation as it existed in 1935.

The fact that a machine actually existed at the time of the trial should have been entirely clear to the Court since the Court viewed a machine in actual operation (Appellant's Exhibit 19). It is submitted that the Court in its questions referred to the past and was answered in the past. Appellee, however, in his Brief is interpreting this testimony to be *in the present,* which is contrary to the facts, and apparently the Court below made the same erroneous assumption (J. A. 33). Additionally, as clearly brought out by counsel for the Appellee (J.A. 29), a machine was diagrammatically illustrated in the application as originally filed (J.A. 40-43 and J.A. 48-50).

The statement in Appellee's Brief, page 8, that the witness Southwick appeared to "ascribe little significance to the change of dimensions" is not substantiated by the record. The witness Southwick (J.A. 14) stated that "A simple reduction in the dimensions in length of the British package, or even a change in width, would not result in the Wallenberg package because of the differences that I have pointed out *and* the method of making the closures". This statement by the witness Southwick clearly establishes that the dimensions of the British package of necessity had to be changed completely in order to render the present carton completely satisfactory over and above any method of closing the package. The dimensions are critical and the witness' testimony must be accepted in its entirety and not in a piece-meal manner as attempted by the Appellee.

It is respectfully urged, therefore, that the Appellee's Brief should be considered in the light of the foregoing discussions, which clarify the actual facts relating to the present Appeal, and that the contentions in Appellant's Brief and the citations in support thereof clearly show patentability in the present package.

Respectfully submitted,

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